Appendix B

Additional Environmental Analysis - Mt. Vernon Siphon

Additional Environmental Analysis – Mount Vernon Siphon

Nevada Irrigation District – February 2010

Background

The Nevada Irrigation District (NID) adopted a Mitigated Negative Declaration for the Mount Vernon Siphon Project pursuant to the California Environmental Quality Act (CEQA) and the District Board of Directors approved the project in November 2008. The project entails the installation of a 24-inch diameter siphon that will replace a portion of the canal. The siphon is planned to be constructed in 2010. The existing water flow in the canal is planned to be eliminated in 2012.

CEQA requires consideration of a wide range of potential environmental impacts, as set out in Appendix G (initial study checklist) of the State CEQA Guidelines. These include, but are not limited to: aesthetics, agricultural resources, air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, population and housing, public services, transportation and traffic, and utilities and service systems. Pursuant to CEQA, if substantial evidence is encountered during the process that indicates a project may have a significant effect on the environment, an Environmental Impact Report must be prepared. Where there is no such evidence, a Negative Declaration or Mitigated Negative Declaration is prepared and adopted. The Mitigated Negative Declaration is made available for public review for at least 30 days in order to provide time for the public and public agencies to comment on its conclusions.

Subsequent to adoption of the Mitigated Negative Declaration and approval of the project, NID, at the request of the U.S. Bureau of Reclamation (Bureau), contracted for and provided to the Bureau an additional cultural resources survey of the project site to ensure that cultural resources had been examined at a sufficient level of detail to meet the Bureau's National Environmental Policy Act (NEPA) needs. The cultural resources survey addressed the existing canal and new siphon areas south of Atwood Road, but was done for CEQA purposes and did not include sufficient documentation for NHPA Section 106 compliance necessitated by the Bureau's NEPA process.

A separate wetland delineation was prepared following the Mitigated Negative Declaration. Our understanding is that it includes the proposed pipeline corridor, potential staging areas, the existing Combie Ophir IV canal, and any areas adjacent to the existing canal that could be affected by filling in the canal.

The following responds to the Bureau of Reclamation's request in December 2009 for additional information regarding the impact to the canal as it relates to the proposed siphon project.

Project Studies

During the CEQA process, an Initial Study was conducted for the project by Jones & Stokes (now ICF International) and it determined that there were no significant effects of the project that could not be mitigated below a threshold of significance. As discussed

above, a Mitigated Negative Declaration documenting this determination was prepared and circulated for public review pursuant to CEQA requirements. No evidence was found that the project would have a significant adverse effect that could not be avoided or otherwise mitigated.

As part of the Initial Study analysis, field surveys were conducted for biological resources (reconnaissance-level survey), cultural resources (reconnaissance-level survey), California red-legged frog (protocol survey), and special-status plants (seasonal botanic survey). The analysis also included modeling of the project's potential air quality and noise impacts using standard project modeling software, based on the expected construction activity. The project, with mitigation, does not exceed either air quality or noise standards.

In preparing the Initial Study, ICF International's staff examined the existing canal south of Atwood Road, as well as the proposed siphon route, during most of their studies (conversations with Terry Rivasplata, Project Manager, 12/22/09). The exceptions were as follows:

- The site assessment and protocol survey for California red-legged frog encompassed a larger area spanning a one-mile radius from the proposed pipeline (per USFWS guidance). This included the existing Combie Ophir IV canal, potential staging areas for pipeline construction, and the extension to the original pipeline plan to a few feet south of Atwood Road. The protocol survey focused on potential breeding areas within that larger area.
- The seasonal botanic survey area included only a 50-foot wide corridor along the proposed siphon route, including that portion of the canal between Atwood Road and the new siphon alignment. Although the existing canal and potential staging areas more than approximately 25 feet from the siphon corridor were part of the reconnaissance-level biological survey, they were not specifically surveyed for special-status plants.

Intended Dewatering Operations

The flows in the Combie Ophir IV canal are typically between 10 and 21 cubic feet per second (cfs). Water levels in the canal will be reduced over a two-year period following completion of the new siphon. The following describes a potential schedule and plan for water reduction in the canal.

- October 1, 2010 Project completed (estimated): Flow in canal reduced to 6 cfs
- October 1, 2011: Flow in canal reduced to 3 cfs.
- October 1, 2012: Flow in canal eliminated.
- October 1, 2013: End of impact study to wells.

Canal Dewatering Impacts

The following discusses the potential impacts to canal resources as a result of the proposed de-watering.

Seepage - The predominant impacts to the canal would likely include dewatering of the surrounding subsurface. The subsurface in the near vicinity of the canal is likely saturated or wetted to some extent, and is evident by the vegetation that exists downslope of the canal. Although this vegetation is fed by natural rainfall, it likely receives seepage from the canal during the dry season. The upland area adjacent to the Combie Ophir Canal consists of nonnative annual grasslands and mixed oak woodlands. Vegetation adjacent to the canal includes native trees, such as oaks (primarily) and pines, Himalayan blackberry, ivy, and annual grasses. None of these species are likely to be adversely affected by dewatering of the canal.

Species Effects – Although the canal (other than the portion described above) and surrounding area were not specifically surveyed for special-status plant species by the ICF International botanist in 2008, in the opinion of the ICF International botanist, the area adjacent to the canal has low potential to support any special-status plants. While the canal itself does not provide any special-status plant habitat and dewatering of the canal would not directly affect any special-status plants, activities related to filling of the canal would disturb the area adjacent to the canal, which could support special-status plants. However, as described in the Initial Study for the pipeline alignment area, the area surrounding the Combie Ophir IV canal is too disturbed by previous and on-going activities, such as grazing, tree cultivation, and canal maintenance, to support special-status plant species. In addition, the only listed special-status plant species with the potential to occur in the area around the canal require specific microhabitats that are not present (serpentine or basalt outcrops). As noted in the Initial Study prepared for this project (see Table 7 of the Initial Study), there are no vernal pools that would be affected by the project. No preconstruction surveys of the area that would be affected along the existing canal and all potential staging areas are recommended, due to the lack of impacts on listed plant species and the low probability of impacts on non-listed special-status plant species.

Because water flows between 0.5 to 1 foot per second down the canal (corresponding to 10 to 21 cfs), aquatic animals and insects are not present due to the lack of standing or slow moving water. This has been observed by NID staff as well as the ICF International biologists during the field reconnaissance. Therefore, no impacts related to aquatic animals or insects are anticipated as a result of dewatering and potential fill. Animals that may drink water from the canal would find water in the near vicinity in private ponds, lakes, and small intermittent streams and reaches of the canal upstream and downstream of the project.

Visual Changes - The Mitigated Negative Declaration mentioned the visual impacts to the canal with the following statement:

> "Additionally, the project will result in reduced water levels in the existing canal over a three-year period following completion of the new water pipeline, as use of this reach of the canal will be phased out and may be filled in with adjacent embankment material and abandoned. Although this will result in permanent impacts to the visual character of the abandoned reach of the canal, the existing canal runs through a rural area, and is primarily visible only to a small number of viewers (residences). Therefore, permanent modifications to the public viewshed and aesthetic resources are considered minimal and would not alter or degrade the

existing visual character of the project site. This impact is considered less-than-significant."

NID plans on using the canal to place an irrigation pipe to backfeed current irrigation customers along the canal. This pipe will be approximately 1,450 feet long and 6 inches in diameter, and will be placed at the bottom of the current canal. The canal will then be backfilled, and bladed smooth. Options will be presented to the property owners existing along the canal on whether to leave the filled in portion flat, for access, or to shape the canal to existing grade; with a small portion remaining for the District's future 6-inch pipe (Figure 1).

Maintenance Changes – NID currently maintains the canal on a regular basis. This includes periodic removal of obstructions from culverts, and repair of the canal when it shows signs of weakness. The canal has failed numerous times over the last three years. The irrigation water has flowed through the failed downslope side of the canal, and has flooded the properties of parcels associated with the particular stretch of canal. This requires stopping the canal flow, repairing the breach (using gunite, sandbags, rebar), and then reintroducing the irrigation water in the canal.

Once the canal is eliminated, the associated maintenance of the canal will be eliminated as well. Limited maintenance may be required of the 6-inch backfeed pipe and likely associated with its connections to the services of NID's customers. The maintenance activities associated with the pipe and accessories will be far less than the current maintenance of the canal. Installation of the siphon will eliminate the risk of canal failure and related local flooding.

Appendix C

Nevada Irrigation District, Mt. Vernon Siphon Project, Wetland and Tributary Delineation, and Nationwide Permit Compliance Report

Nevada Irrigation District

Mt. Vernon Siphon Project

Wetland and Tributary Delineation

and

Nationwide Permit Compliance Report

Prepared by EcoSynthesis Scientific & Regulatory Services, Inc.

Prepared for Nevada Irrigation District

March 20, 2010

SUMMARY

This document provides a preliminary delineation of wetlands and tributary waters of the U.S. on the Nevada Irrigation District (NID) Mt. Vernon Siphon project site, and description of project impacts which are in compliance with nationwide permit 12. The study area was delimited by the extent of the utility and temporary construction easements for the project. Additional documentation pertaining to the project is included on a CD that accompanies this report.

Field work for the delineation took place during November 2009, during which time conclusive observations of wetland and tributary hydrology and soils were made. Dominant plants were also growing and identifiable to species. Wetlands were determined following the methodology of the 1987 Corps of Engineers Wetlands Delineation Manual and 2008 Regional Supplement for the Arid West Region. Existing irrigation canals were determined to be non-jurisdictional because they were excavated on dry land and their hydrologic characteristics are solely the result of pumped and/or diverted irrigation water.

The NID Mt. Vernon Siphon study area includes a total of 0.071 acre of Riparian Scrub, Freshwater Emergent Wetland, and seasonal tributary waters. There are a total of 205 lineal feet of tributaries within the study area.

Section 404 Impacts and NWP 12 Compliance

This report also provides informal documentation of intent to rely upon nationwide permit (NWP) 12 to discharge fill material into wetlands or other waters of the United States in order to construct a utility line (water pipeline) and appurtenant facilities. Because a Section 10 permit is not required, and the total area of fill is less than 0.10 acre and 500 lineal feet of tributary, a pre-construction notification is not required, however, this submittal provides all of the information normally included in a notification.

Proposed impacts include backfill of the pipeline trench, construction of a gravel-surfaced maintenance access road, installation of blow-off structures and associated erosion protection, and fill surrounding one maintenance road culvert. A total of 0.056 acre of fill is proposed, including up to165 lineal feet of ephemeral/intermittent tributaries. Some of this total area and lineal distance is for temporary during-construction fills which will be removed.

The proposed action will be undertaken in compliance with all nationwide permit conditions, including securing water quality certification prior to discharge of fill.

Compensatory Mitigation by In-lieu Fees

Compensatory mitigation will be provided through the payment of in-lieu fees to National Fish and Wildlife Foundation.

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1 INTRODUCTION

1.1 Contact information

Project number: Not assigned

Project Applicant: Adrian Schneider
Nevada Irrigation District
1036 W. Main Street
Grass Valley, CA 95945-5424
Telephone (530) 271-6839
schneider@nid.dst.ca.us

Delineator: Adrian Juncosa
EcoSynthesis Scientific & Regulatory Services, Inc.
16173 Lancaster Place
Truckee, CA 96161
Telephone (530) 582-6812
ajuncosa@ecosynthesis.com

1.2 Project Location and Description

The study area described in this report is located in Placer County, north of Auburn and west of Highway 49 (Figure 1).

Site location: USGS quadrangle: Auburn

Section 35, T. 15 N, R. 8 E

Latitude/Longitude: approx. N 38.93° W 121.12°

Driving access from Sacramento is via I-80 to Highway 49 (in Auburn), north on Hwy 49 approximately 2.6 miles to Atwood Road, turn left and go 1.3 miles west to the north end of the project. To access the southern end of the project, continue 0.4 additional miles (total 1.7 miles from Hwy 49) to Mt. Vernon Road. Turn left and travel south approximately 0.75 mile. Exercise caution to park and walk safely in this area.

The project site is defined as the limits of the permanent utility and temporary construction easements, which form a long narrow 4.13-acre area passing through rural residential and agricultural areas. The existing habitats in the region are primarily Foothill Hardwood (Oak) Woodland and Annual Grassland. Some Foothill Riparian, Wet Meadow, and Freshwater Emergent Wetlands occur along unnamed tributaries.

1.3 Purpose of Project

NID has determined that increased water delivery demands within its service area make it necessary to replace a portion of the existing Mt. Vernon irrigation ditch with a 24-inch pipeline, which will largely

follow a different pathway than the existing ditch. Pipelines by their very nature are linear and follow orientation that are determined by engineering and functional feasibility. In the present case, this necessitates crossings of tributary and wetland areas by the pipeline, gravel maintenance access road, and appurtenant structures (culvert, blow-off structures to be used to empty the pipeline for maintenance). Nationwide permit 12 allows for these and associated temporary construction impacts.

1.4 Project Description

The project consists of replacement of a segment of the open Combie-Ophir canal with a 24-inch pipeline, and construction of associated control and maintenance structures and a gravel-surfaced maintenance access road. Additional details pertaining to project impacts are provided below and in Section 4.2.

PIPELINE AND ROAD CROSSINGS

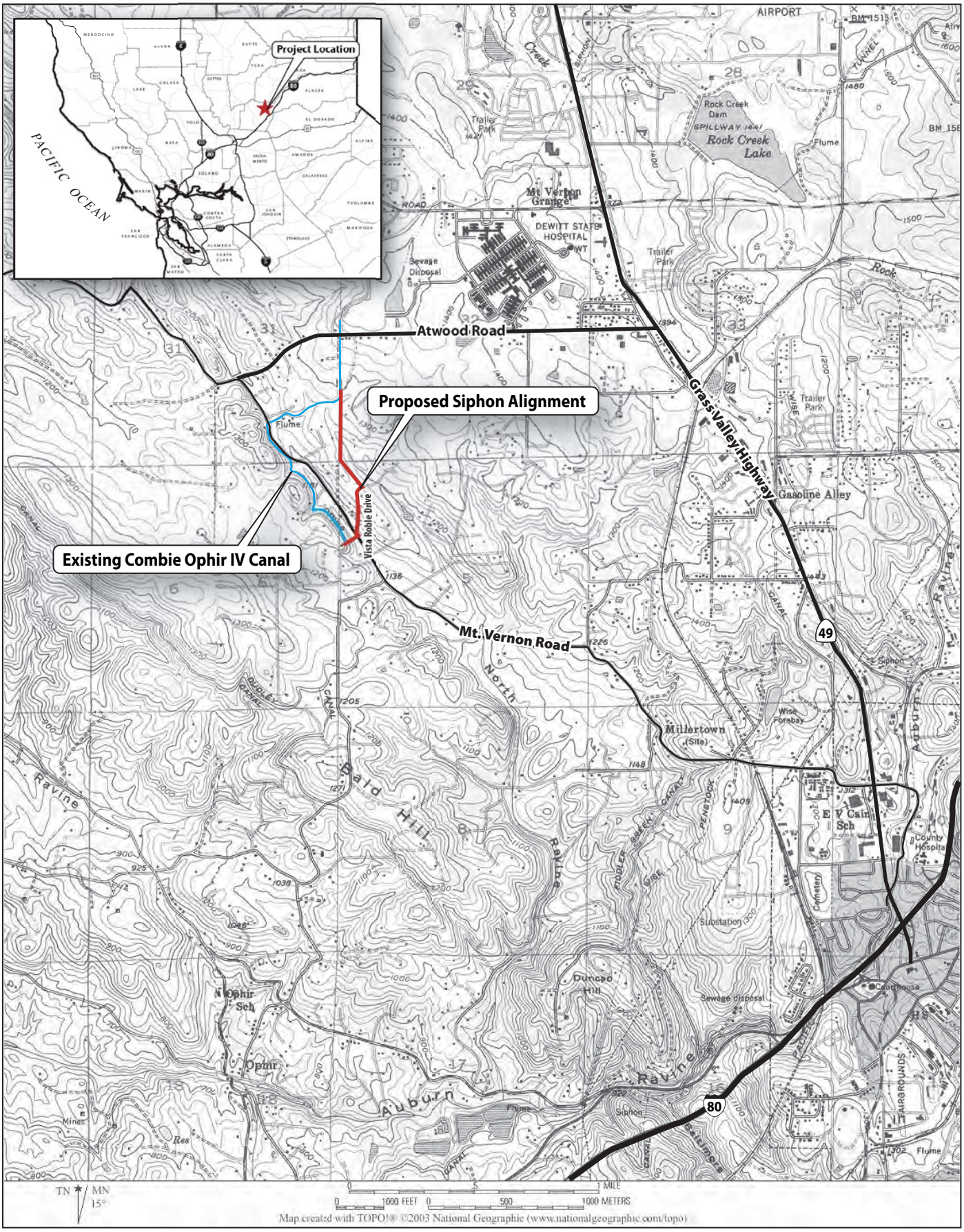
The pipeline alignment crosses an unnamed tributary informally known as North Ravine at two points. At one of these points, a culverted crossing will be constructed for the access road. At the other, the road will be discontinuous, so there will be no culverted or other road crossing. Finally, near the southern terminus of the project, there is existing fill and a culvert in the realigned historic tributary drainageway next to Mt. Vernon Road, so there is no new fill for the pipeline, however, rock protection (fill) must be placed for the installation of the blow-off structure at that location.

OTHER STRUCTURES

Other appurtenant structures include three blow-off structures which can be used to drain water from the pipeline for maintenance or repair. These structures must be located at low points (thus, inevitably at the points where the project crosses tributaries) in order to function. They will be surrounded by rock protection so that the tributary channel does not erode when the pipeline is drained.

PROJECT SCHEDULE

Construction of the initial phase of the project, including the fills for which the permittee will rely upon nationwide permit (NWP) 12, is proposed to occur between May 1 and October 15, 2010.



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Jones & Stokes

Figure 1
Mt. Vernon Road Siphon Project Location

2 WETLAND DELINEATION METHODOLOGY

2.1 Field Work

Field work was carried out in November and December 2009, following the methodology of the 1987 Corps Manual (Environmental Laboratory, 1987) and the Arid West Regional Supplement (ERDC, 2008). The delineation was conducted by Dr. Adrian Juncosa.

Data point locations were selected in order to provide information representative of conditions within areas determined to be jurisdictional and in nearby uplands. Observations were noted in the Remarks section that explain what characteristics were used to determine the jurisdictional wetland limit.

At each data point, determinations were made whether each of the three mandatory wetland criteria (hydrophytic vegetation, wetland hydrology, and hydric soils) are met under normal circumstances. Areas meeting all three criteria were determined to be wetlands.

2.2 Mapping

Graphic features were imported from the CAD files created by Kennedy/Jenks Consultants for the project design, and used to create the graphics for this report. In some cases, features were not available in CAD file format but were digitally copied over from an Adobe Acrobat .pdf file based upon CAD files or layers that were not available to us prior to conducting the delineation. Wetland and tributary features were drawn as accurately as was feasible on prints of the project draft design plans, by measuring from identifiable landmarks with an engineer's tape measure. The measured boundaries were then transferred into the digital mapping file. Dense tree cover made use of sub-meter GPS infeasible, and conventional land surveying of wetland/tributary boundaries was not available.

2.3 Mandatory Criteria

VEGETATION

Dominant plant species were determined according to the 50/20 rule (species that individually or collectively constitute >50 percent relative cover, plus any other individual species with >20 percent relative cover). These and other plant species present were identified and named primarily according to Hickman (1993). The plant indicator statuses recorded on the data sheets are from the 1996 proposed revision of the list (U. S. Fish and Wildlife Service, 1997), according to the following definitions:

OBL	Obligate; 99-100 percent of occurrences are in wetlands
FACW	Facultative-wetland; 67-99 percent of occurrences are in wetlands
FAC	Facultative; 33-67 percent of occurrences are in wetlands
FACU	Facultative-upland; 1-33 percent of occurrences are in wetlands
Upl	Upland; 0-1 percent of occurrences are in wetlands (includes NI and unlisted species)

Sites where more than 50 percent of dominant species were FAC or wetter, or which had a prevalence index of 3.0 or less with wetland hydrology and hydric soils, were determined to meet the hydrophytic vegetation criterion.

HYDROLOGY

No gauge or other records of surface or subsurface hydrology were available for the wetland determination points on the project site. Climate information for the Auburn station (040383) was obtained from the Western Regional Climate Center web site (http://www.wrcc.dri.edu). This is the nearest reporting station to the site and is less than one mile away.

Field work occurred during the rainy season (November-December), when wetland hydrology of seasonally saturated sites would ordinarily be observed directly, and normal flow would be expected within any tributaries.

Given that field work took place during the rainy season, but not during or immediately following any exceptionally large precipitation events, sites that exhibited inundation or near-surface saturation were determined to meet the wetland hydrology criterion.

SOILS

Soil Survey

Information on soils was obtained from the Internet NRCS Web Soil Survey application available at http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx. No hydric soils list covering the study area could be obtained from NRCS staff. Absent this list, an attempt was made to realize the purpose of the entry cell on the data sheet for local hydric soils list by judging which soils types would be likely to be listed as possibly having hydric inclusions, based upon the details of their descriptions.

More than two species of non-coniferous plants were actively growing at the time of the site visits, therefore observations recorded on the data sheets pertain to normal growing season conditions.

Soils Test Pits

Soils test pits were excavated to depths between 8 inches (where rocks were encountered) and 16 inches. Pits were studied according to the 1987 Manual and Regional Supplement. Soil colors were determined moist, using the Munsell color charts (Kollmorgen Instruments, 1990). Determinations of the mandatory hydric soils criterion were made primarily on the basis of NRCS (2006).

2.4 Non-wetland waters

The unnamed tributary that crosses the study site has perennial or nearly perennial flow. Some or most of this flow is from irrigation water, but in light of the natural topography, the tributary and adjacent wetlands (where they occur outside the channel limit) were delineated as jurisdictional features. Limits of jurisdiction were determined to occur at the ordinary high water mark (top of the well marked incised bank, or location of seemingly typical surface flow indicators), or the outer limit of adjacent wetlands, wherever these occurred.

3 DELINEATION RESULTS AND DISCUSSION

3.1 Vegetation

The following table provides a list of plant species that were found at the data points that were studied (not a plant list for the entire site; listed in alphabetical order by scientific name):

Scientific Name	Common Name	Indicator Status
Alnus rhombifolia	white alder	FACW
Bromus hordeaceus	soft chess	FACU
Cardamine oligosperma	bitter cress	FACW
Carex praegracilis	field sedge	FACW
Cirsium vulgare	bull thistle	FAC
Cyperus eragrostis	umbrella sedge	FACW
Elymus glaucus	blue wild-rye	FACU
Festuca arundinacea	tall fescue	FAC
Geranium sp.	cranesbill	upl
Juncus balticus	Baltic rush	FACW
Juncus effusus	soft rush	OBL
Ligustrum sp.	privet	upl
Paspalum dilatatum	dallis grass	FAC
Polygonum punctatum	smartweed	OBL
Quercus lobata	FAC(U)	upl
Quercus wislizenii	interior live oak	upl
Rubus armeniacus (discolor)	Armenian (Himalaya) blackberry	FAC
Rumex conglomeratus/crispus	clustered/curly dock	FACW
Salix lasiolepis	arroyo willow	FACW
Senecio vulgare	common groundsel	upl
Sonchus sp.	sow thistle	FAC
Torilis arvensis		upl

Despite the timing of the delineation field work (wintertime vs. spring), vegetation determinations were readily made and unequivocal. Boundaries between strongly hydrophytic vegetation (substantially dominated by FACW species) and strongly upland vegetation (virtual absence of even FAC species) were generally very abrupt.

3.2 Hydrology

Mean annual rainfall at the Auburn station (043573) is 34.32 inches (Western Regional Climate Center; period of record 1966-2007). Approximately 81 percent of this rainfall occurs November through March.

Within the delineated wetlands, surface indicators of wetland hydrology were scanty and, given the near-channel setting, would only be secondary indicators in any case. However, saturation was observed within 12 inches of the surface in all areas dominated by hydrophytic vegetation.

ARTIFICIAL HYDROLOGY (IRRIGATED WETLANDS)

Several irrigation canals, including both the NID Combie-Ophir canal and a private ditch, were clearly and unequivocally constructed by excavation in dry land and are supplied with water from the District's irrigation system. In accordance with Sacramento District Regulatory Branch Memorandum 2007-01, these features themselves were not considered to be potential jurisdictional wetlands. Nevertheless, an area of marginally hydrophytic appearing vegetation on the downslope side of the Howard Ditch (private, but supplied with NID water) was evaluated for the potential that it might meet the three mandatory wetland criteria (see data point 5); it did not, therefore consideration of whether it might be excluded by virtue of being supported by irrigation was moot. A similar area downslope of the Combie-Ophir canal, near the southern terminus of the present project, seemed likely to have been formerly supported by seepage from the canal itself, which has recently been sealed with shotcrete. Notably, wetland hydrology was not observed at this location, on the same date that near-surface saturation was observed in the mapped jurisdictional wetland adjacent to Mt. Vernon Road. This and the positional relationship to the canal provides conclusive evidence that the former hydrologic support for the vegetation was artificial, and that it is now absent as a result of normal canal maintenance activities (thus, all three parameters are no longer met). Moreover, this area lies just outside the project (easement) area and outside the area of direct or indirect impact.

3.3 Soils

SOIL SURVEY

Due to narrowness of the study area and the nature of the soils maps available via download from Web Soil Survey, it is not feasible to provide an accurate map showing the limits of soil map units. However, four of the five map units within the area are Auburn silt loam or complexes including Auburn loam. The fifth map unit is Boomer loam, occurring only on steep slopes at the southwestern end of the project area (not where any candidate wetland areas are located). Accordingly, although it is likely that some of the data points are located in tiny alluvial inclusions, the only described soil type relevant to the present study is Auburn loam.

SOIL TYPE DESCRIPTIONS

Auburn loam is a well drained loam to heavy loam with moderate permeability. It is underlain by variably weathered metamorphic rocks at relatively shallow depths (14 to 27 inches). Auburn loam is classified as a Xerochrepts, a group whose name connotes dry soil conditions and therefore does not typically include hydric soils types. However, in localized topographic depressions, the shallow bedrock would seem to have the potential to result in ponding or saturation, as along drainage courses such as those of the study area.

OBSERVATIONS AT SOILS TEST PITS

Observations at the soils test pits were plausibly consistent with the mapped soils types, with respect to overall chroma, loamy texture, and, where encountered, shallow depth to weathered rock. Definite redoximorphic features were observed in the soils that were determined to be hydric.

GROWING SEASON

Based upon consideration of soil survey information and the climate of Auburn, the NID Mt. Vernon Siphon site probably has an average growing season of over 300 (perhaps over 320) days. Direct observation of growing plants meant that the biological growing season (root growth and likelihood of sufficient microbial activity to deplete soil oxygen) was definitely underway at the time the field work was done.

3.4 Jurisdictional Waters

A total of 0.071 acres of jurisdictional waters were identified in the study, as summarized below. The preliminary delineation map is provided in Figure 2. Jurisdictional wetlands and waters occur in three locations (see insets A, B, C in Figure 2), one at the northern end of the project, another roughly in the center of it, and the third at the southern end, adjacent to Mt. Vernon Road. The northern and central areas represent fragments of the same unnamed tributary, which flows southward into North (Auburn) Ravine. The southern area is in a different valley (occupied by Mt. Vernon Road), but is also tributary to North (Auburn) Ravine.

Table 2. Jurisdictional wetlands and other waters of the United States within the NID Mt. Vernon Siphon study area. Tributary length within project (easement) area is given for each category, even though the tributary is not mapped separately on Figure 2 for the two wetland types.

Type	Length (ft)	Area (acres)
Riparian Scrub Wetland	65	0.040
Freshwater Emergent Wetland	40	0.014
Seasonal Tributary	100	0.017
Total Jurisdictional Waters	205	0.071

RIPARIAN SCRUB WETLAND

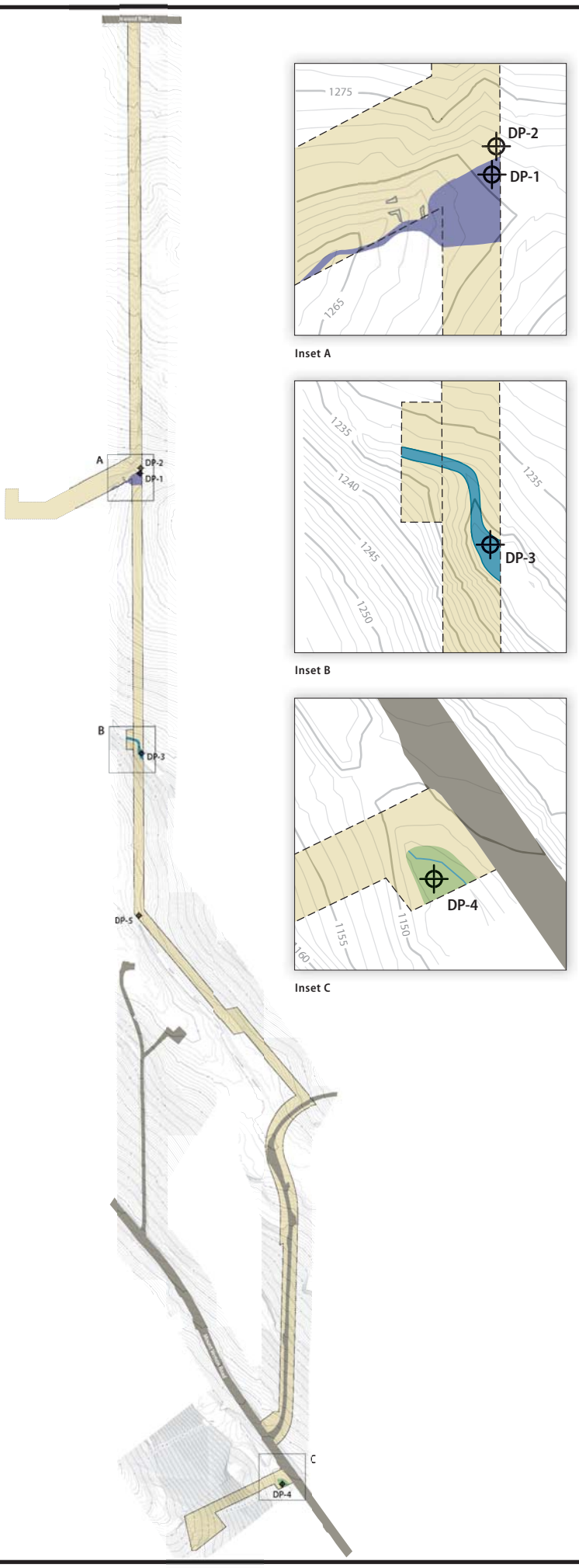
Riparian scrub wetland occurs at one location near the northern end of the project. This area is dominated primarily by arroyo willow and white alder, with an understory of Armenian blackberry (see DP 1). Herbaceous wetland is present nearby, but just outside the limit of the project study area (utility easement). It was not possible to map the tributary limit separately from the riparian wetland limit.

FRESHWATER EMERGENT WETLAND

Freshwater emergent wetland occurs in two areas, adjacent to seasonal tributaries that probably flow for a minimum of 3-4 months each year under normal precipitation. In roughly the center of the project site (see Inset B on Figure 2), some emergent wetland also occurs on the low floodplain of the unnamed tributary, but because it is probably within the OHWM, the entire area at this location was delineated as Seasonal Tributary. The emergent wetland area at the south end of the project (inset C) is a highly disturbed area, with a drainageway that is too narrow to map accurately meandering through it, clearly representing the realigned historic tributary that flowed through the ravine now occupied by Mt. Vernon Road. The vegetation of this area is largely ruderal and appears to be regularly mowed for fuel management, or it would be dominated by a mixture of Armenian blackberry and FAC to OBL herbaceous vegetation. Arroyo willow scrub occurs just off site to the southeast within the same functional wetland system.

SEASONAL TRIBUTARY

The tributary on the site flows for at least 3 to 4 months annually, with a clearly defined channel bed and bank over most of its length. Herbaceous wetland vegetation occurs within the channel at the central jurisdictional area (inset B). At the northern area (inset A), woody riparian vegetation (white alder, arroyo willow, Armenian blackberry) occurs both in channel (below the OHWM) and immediately adjacent to it. Channel beds within the study area are generally gravelly to rocky.



Inset A

Inset B

Inset C

EcoSynthesis
SCIENTIFIC & REGULATORY SERVICES INC

Nevada Irrigation District
Mount Vernon Siphon Project

Figure 2. Preliminary Wetland Delineation
March 20, 2010

Overview Map Scale

0 150 300 450 600

1 : 3,600 (1 in = 300 ft)

N

Inset Map Scale

0 25 50 75 100

1 : 600 (1 in = 50 ft)

Legend

- Seasonal Tributary
- Riparian Scrub
- Freshwater Emergent Wetland
- Other Habitat Types
- Easement Area
- Data Points

Summary of Wetland Acreage

TYPE OF WETLAND/WATERS	AREA (ACRES)
Riparian Scrub Wetland	0.040
Freshwater Emergent Wetland	0.014
Seasonal Tributary	0.017
Total	**0.071**

Total Project (Easement) Area **4.13 acres**

Notes

Base mapping provided by Kennedy/Jenks Consultants.

Study area boundary is the limit of the NID easement for the project, including temporary construction easements.

Other habitat types include developed areas, tree plantation, oak woodland, non-native grassland, and ruderal vegetation.

Existing canal, which was excavated on dry land, is essentially devoid of vegetation, and is supplied with water exclusively from irrigation, is not shown.

Seasonal tributary is referred to as "North Ravine" on some maps but is unnamed on others.

4 NATIONWIDE PERMIT IMPACTS AND COMPLIANCE

4.1 Description of Affected Waters

The Mt. Vernon Siphon project will result in discharge of fill material into several small wetlands and intermittent tributaries, as shown on Figure 3. Fills that are accounted for in this notification include road construction and one culverted crossing, excavation and construction of a detention basin in an area where seasonal wetland occurs, and any other areas of jurisdictional waters that lie within a residential parcel to be created (even if initial infrastructure will not affect those areas).

The existing jurisdictional waters and project impacts are as follows:

Type of Water	**Acreage (length)**		
	Existing	Avoided	To Be Filled
Riparian Scrub	0.040 (65 ft)	0.008 (30 ft)	0.032 (35 ft)
Freshwater Emergent Wetland	0.014 (40 ft)	0.007 (10 ft)	0.007 (30 ft)
Seasonal tributary	0.017 (100 ft)	0.000 (0 ft)	0.017 (100 ft)
Total	**0.071**	**0.015**	**0.056 (165 ft)**

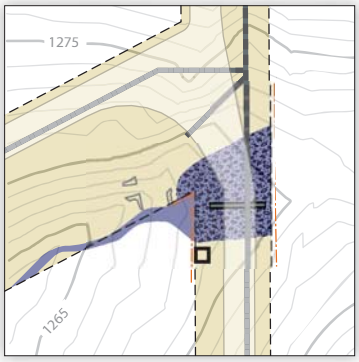
Some of the tributary fill will be for a temporary crossing for the use of construction equipment, and will be removed at the conclusion of construction. However, this area is included within the impact acreage to ensure that any residual impact is accounted for. Also, although the very narrow channel portion of the Freshwater Emergent Wetland is designated not to be filled with rock protection, this might prove infeasible, therefore this fill is included in the table.

Additional description of the nature of the affected wetlands and waters is found in Section 3.4 of this report.

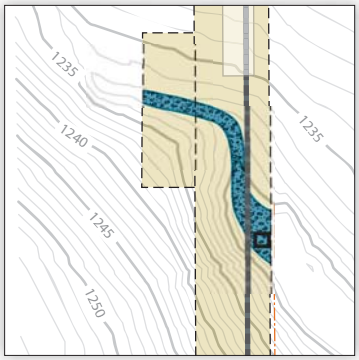
4.2 Project Elements With Jurisdictional Impacts

PIPELINE

The main project element is a 24" diameter pipeline, with an estimated trench and backfill width of approximately 5 feet. There are two areas where the pipeline crosses jurisdictional wetland/waters; see Insets A and B on Figure 3 and page C2 of construction plans (pdf page 5 of the file named NID_Mt_Vernon_Plans_3172010, included on the project CD). Due to the locally very uneven topography at the Seasonal Tributary crossing, it was assumed that the trench and backfill at this site might affect as much as the whole width of the tributary. The pipeline trench will be backfilled to original grade, generally according to detail 4 on page C14 of construction plans (pdf page 17 of NID_Mt_Vernon_Plans_3172010 on project CD), except that it is assumed that the backfill surface within the tributary channel will be protected with rock rather than aggregate base, to conform to the adjacent rock protection for the blow-off structure (see below).



Inset A



Inset B

Inset C

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Nevada Irrigation District
Mount Vernon Siphon Project

Figure 3. Project Impacts on Wetlands and Other Waters
March 20, 2010

Overview Map Scale

0 150 300 450 600

1 : 3,600 (1 in = 300 ft)

N

Inset Map Scale

0 25 50 75 100

1 : 600 (1 in = 50 ft)

Legend

- Seasonal Tributary
- Riparian Scrub
- Freshwater Emergent Wetland
- Other Habitat Types
- Easement Area
- Proposed Access Road
- Proposed Pipeline
- Culvert
- Wetland Fill
- Blowoff Structure
- Silt Fence

Table of Impacts (NWP 12)

TYPE OF WETLAND/WATERS	AREA (ACRES)
Riparian Scrub Wetland	0.032
Freshwater Emergent Wetland	0.007
Seasonal Tributary	0.017
Total	**0.056**

Total Project (Easement) Area **4.13 acres**

Notes

Base mapping and locations of project facilities provided by Kennedy/Jenks Consultants.

Impact table includes both temporary and permanent placement of fills. See text for additional discussion of impact determination.

Location of silt fence is minimum extent of sediment controls. Additional sediment barriers may be included in SWPPP, to be developed prior to initiation of construction.

MAINTENANCE ACCESS ROAD

There is one access road crossing, with a 36" culvert (see Inset A on Figure 3 and page C2 of construction plans [pdf page 5 of NID_Mt_Vernon_Plans_3172010 on project CD]). Calculations pertaining to the selection of the culvert diameter are included on the project CD as the file named Mt Vernon Culvert Calculations. Engineered fill to minimum 18" above culvert. Thus total fill of approximately 4.5 ft above original grade. Construction details of the fill slope and surface protection are not included in the construction plans, but it is assumed that the surface will be protected with rip-rap. Absent precise details of the construction in this area (and of rock protection associated with the blow-off structure at this site), it is assumed that the fill and rock protection will extend throughout the wetland area within, but not beyond, the limit of the easement area at this site.

BLOW-OFF STRUCTURES

Blow-off structures are included at all three jurisdictional impact sites (Insets A, B, and C on Figure 3; pages C2 and C5 of construction plans [pdf pages 5 and 8 of NID_Mt_Vernon_Plans_3172010 on project CD]). These are used to drain water from the pipeline as necessary for maintenance and are the functional equivalent of the canal structure that NID already uses to divert canal flows into the tributary at the site shown in Inset A of Figures 2 and 3. The blow-off structures must necessarily be located at the low points along the pipeline. At the surface, these consist of a square concrete box structure with adjacent rock protection onto which the water flows during a draining operation. See details 1, 2, and A on page C13, and detail 2 on page C16 of the construction plans (pdf page 16 and 19 of NID_Mt_Vernon_Plans_3172010 on project CD).

4.3 Compliance with Permit Conditions

NWP 12 PROVISIONS

The project is to construct a water pipeline and associated facilities, an activity for which NWP 12 provides authorization to fill up to 0.5 acre and 500 lineal feet of waters of the U.S. The project's impacts are well below these thresholds, and are below the thresholds which require a formal pre-construction notification (PCN). Accordingly, the present report does not constitute a PCN, but provides essentially the same informational content as would normally be included in such a notification.

GENERAL CONDITIONS

1. *Navigation.* The tributaries are not navigable; the project will have no direct effect on navigable waters.
2. *Maintenance.* Observation and maintenance of the pipeline and access road are normal parts of project operation.
3. *Erosion and sediment controls.* Erosion and sediment controls will be implemented in accordance with the provisions of the Section 401 water quality certification and any other applicable construction permits (e.g., general NPDES permit).
4. *Aquatic life movements.* No known aquatic life migrates through the project area, although salmon are known occasionally to be present in a receiving downstream water (Auburn Ravine). It would be reasonable to expect that invertebrates do move up and down the tributaries. Such movement would not be impeded by the proposed culverts.
5. *Equipment.* Equipment will be operated within wetlands only in order to place the permitted fills.
6. *Regional conditions.* No histosols or fens will be affected. The project is not within the Lake Tahoe basin. No other regional conditions apply to the area where the project is located.
7. *Wild and scenic rivers.* The affected tributaries are unnamed and ephemeral or intermittent; neither of them are either designated nor under study for designation as a Wild and Scenic River.
8. *Tribal rights.* The project will not affect any tribal rights, including water, fishing, or hunting rights.
9. *Water quality.* The project owner will submit application for water quality certification to Central Valley Regional Water Quality Control Board, and will obtain such certification prior to initiating construction within waters of the U.S.
10. *Coastal zone management.* The project does not lie within the coastal zone.
11. *Endangered species.* The project will not affect an endangered species or occupied habitat for such species. Jones and Stokes Associates determined that potentially suitable habitat for California red-legged frog occurs within the project region, but a protocol survey for that species was carried out and no individuals were found, therefore it was determined that the project would not affect this (or any other) listed threatened or endangered species. Documentation of the survey and a copy of the concurrence letter from U.S. Fish and Wildlife Service have been provided on a CD accompanying this submittal.

The CEQA lead agency, NID, has adopted a negative declaration for the project, which found that no other occurrences of threatened or endangered species, or of critical habitat therefor, are found within the project site, and that the project will not result in off-site adverse impacts upon any listed species. Potentially suitable habitat for western pond turtle occurs within or just outside the project area. A survey requirement and contingent mitigation is provided for this species. See discussion below in Section 4.3 for additional information pertaining to listed species.

12. *Historic properties*. The project was determined not to have any effect on historic structures or other cultural resources (see initial study and mitigated negative declaration, included on CD, for additional discussion).

13. *Notification*. Pre-construction notification is not required, but this submittal provides informal record of the proposed fill of 0.056 acre of jurisdictional wetland and other waters, including up to 165 lineal feet of tributaries. With the exception of a 20 foot culvert, the remainder of this tributary length will be restored to original channel contours (albeit with rock protection in place).

14. *Compliance certification*. Certification of payment of in-lieu fees will be provided prior to initiation of construction.

15. *Multiple NWPs*. The project relies only upon NWP 12.

16. *Water supply intakes*. No water supply intake is located within the project site. (NID flow control structures within their artificial canals are not intake structures within the meaning of this condition.)

17. *Shellfish beds*. No shellfish beds are located in the project site.

18. *Suitable material*. Soil and rock fill to be utilized for the culvert fills and outfalls will be suitable new construction materials and will not contain toxic pollutants in toxic amounts.

19. *Mitigation*. Since special aquatic sites (wetlands) will be affected, compensatory mitigation is required. The easement area is extremely limited and does not include any areas suitable for wetland creation. Therefore, for this project, the only feasible option is to provide compensatory mitigation by paying in-lieu fees. Payment of such fees will be made and documentation thereof will be provided to the Corps and other agencies prior to initiation of construction. Also, the area and conditions of the easement for the project do not afford any opportunity for protection of avoided wetland areas by means of a separate conservation easement.

20. *Spawning areas*. No spawning areas are known or likely to occur within the project area.

21. *Water flows*. The culvert designs (the latter for one crossing only) are intended not to alter water flows in the unaffected portions of the intermittent tributaries.

22. *Adverse effects from impoundments*. No impoundments are proposed.

23. *Waterfowl breeding areas*. No migratory waterfowl breed in the project site.

24. *Temporary fills*. A small portion of the project fills will be temporary, to enable construction equipment to cross the seasonal tributary. This will be undertaken by placement of geofabric prior to placement of rock or other fill material for the crossing, and the material will be removed at the conclusion of construction. However, the exact areal extent of temporary versus permanent fill in

this area is not certain, therefore all fill areas will be considered as permanent ones for the purposes of determination of in-lieu fee amount (thus, compensatory mitigation will be provided for all fill area whether temporary or permanent).

25. *Critical resource waters.* No critical resource waters occur within the project site.
26. *Fills within 100-year floodplains.* No fill will be placed below headwaters. The intermittent tributaries are not locally-mapped floodways, and no FEMA-mapped 100-year floodplains occur in the areas where fill will be placed to build the project roads, or within any of the newly created residential parcels.
27. *Construction period.* The work is scheduled to be completed prior to October 30, 2010.

4.4 Threatened and Endangered Species

The following federally and/or state-listed species occur in the western Sierra Nevada foothills in the elevational range of oak woodlands (list does not include species restricted to the conifer zone or to the valley grasslands and vernal pools):

Plants
Calystegia stebbinsii (Stebbins's morning-glory)
Fremontodendron decumbens (Pine Hill flannelbush)
Sidalcea stipularis (Scadden flat checkerbloom)

Insects
Desmocerus californicus dimorphus (Valley elderberry longhorn beetle)

Vertebrates
Haliaeetus leucocephalus (bald eagle)
Oncorhynchus tshawytscha (spring run chinook salmon)
Rana aurora draytonii (California red-legged frog [CRLF])

PLANTS

The morning-glory and flannelbush species occur only on specialized soils (respectively, serpentine- and gabbrodiorite-derived). These soils do not occur within the project site.

Scadden Flat checkerbloom occurs in relatively long-duration wetlands only, and has never been recorded outside a very narrow area in Grass Valley and a few miles to the southwest. It is a rather large and obviously distinctive plant. Botanical surveys conducted by Jones & Stokes Associates determined that no listed or other special-status plant species were present in the project area (see Appendix C in the file Mt_Vernon_IS_Final_MND.pdf included on CD that accompanies this report).

INSECTS

Valley elderberry longhorn beetle (VELB) inhabits elderberry (*Sambucus*) shrubs over a wide range within the Central Valley. There are no elderberry shrubs within the project area.

WILDLIFE

Bald eagle nests and winters at large bodies of water where it can prey upon fish and waterfowl. It utilizes large trees or snags immediately adjacent to the water. No such body of water occurs at the project site.

Spring-run chinook salmon spawn in tributaries of all of the major northern California rivers, but require a tributary that is at least deep enough over its entire length (with the possible exception of very short distances) for a spawning sized fish to pass, and for suitable spawning substrates to be present within the tributary. Neither of these criteria is met by the tributary on the project site.

California red-legged frog (CRLF) breeds in long-seasonal or perennial waters, but may disperse to upland areas for portions of the year. Jones & Stokes Associates conducted a habitat suitability

assessment for the species and determined that suitable habitat was present within dispersal distance of the project site. Subsequently, a formal protocol survey was carried out for CRLF itself, which determined that the species is not present in the project area and that the project will not have any adverse effect on CRLF. The documentation of the surveys and the concurrence letter from the U.S. Fish and Wildlife Service are provided on a CD that accompanies this report (see Appendices A, B, and C to the file Mt_Vernon_IS_Final_MND.pdf.

In summary, construction and operation of the Mt. Vernon Siphon project was determined not to have any adverse effect on listed endangered or threatened species, or on candidates for listed, or upon other special-status species.

5 REFERENCES

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Appendix A. Data Sheets

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WETLAND DETERMINATION DATA FORM: *Arid West Region*

Project/Site: **NID Mt Vernon Siphon Project**			Sampling Date: **November 24, 2010**
Applicant/Owner: **Nevada Irrigation District**			Sampling Point Number: **1**
City/County: **Placer County**		State: **California**	Investigator(s): **Adrian Juncosa**
Section, Township, Range: **Sect 31 T13N R8E**	Lat: **38.93100** Long: **121.11682**	Datum: **NAD 83**	Subregion (LRR): **C**
Sampling Point Location: **In riparian vegetation near north end of project**			Landform: **floodplain of small channel**
Soil Map Unit: **Auburn loam**		NWI classification:	Local relief: **concave** / Slope (%): **0**
Are climatic/hydrologic conditions typical for this time of year? ☐ Yes ☐ No		Are ☐ Vegetation , ☐ Soil , or ■ Hydrology significantly disturbed?	
Are "Normal Circumstances" present? ☐ Yes ☐ No		Are ☐ Vegetation , ☐ Soil , or ☐ Hydrology naturally problematic?	

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	☐ Yes ☐ No	Sampled area within a wetland?	☐ Yes ☐ No
Hydric soil present?	☐ Yes ☐ No	Sampled area within other water of state?	☐ Yes ☐ No
Wetland hydrology present?	☐ Yes ☐ No		

Remarks:

Hydrology may be supplemented by seepage from canal, but would probably meet criterion without that.

VEGETATION

Tree Stratum (Plot size: **1500 sf** *)*	*% Abs. Cover*	*Dominant*	*Ind. Status*
Alnus rhombifolia	**10**	**Y**	**FACW**
Total cover			
Sapling/Shrub Stratum (Plot size: **1500 sf** *)*	*% Abs. Cover*	*Dominant*	*Ind. Status*
Salix lasiolepis	**50**	**Y**	**FACW**
Rubus armeniacus	**50**	**Y**	**FAC**
Total cover			
Herb Stratum (Plot size:)	*% Abs. Cover*	*Dominant*	*Ind. Status*
no herbs present			
Total cover			
Percent (%) bare ground in Herb Stratum			
Percent (%) cover of biotic crust			
Woody Vine Stratum	*% Abs. Cover*	*Dominant*	*Indicator*
Total cover			

Dominance Test worksheet:

Number of dominant species that are OBL, FACW, or FAC: **3** (A)

Total number of dominant species across all strata: **3** (B)

Percent of dominant species that are OBL, FACW, or FAC: **100** (A/B)

Prevalence Index worksheet:

% Total Cover

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column Totals: _____ (A) = _____ (B)

Prevalence Index: B/A = _____

Hydrophytic Vegetation Indicators:

■ Dominance Test is >50%

☐ Prevalence Index is ≤3.0[1]

☐ Morphological Adaptations in FACU species[1]

☐ Problematic Hydrophytic Vegetation[1]

[1]*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.*

Hydrophytic vegetation present? ☐ **Yes** ☐ **No**

Remarks:

Sampling Point Number: 1

SOIL

PROFILE DESCRIPTION

	Matrix		Redox Features					
Depth (inches)	*Color (moist)*	*%*	*Color (moist)*	*%*	*Type*[1]	*Loc*[2]	*Texture*	*Remarks*
0-10	**10YR 2/1**	**100**					**SiCL**	
changing to	**2.5Y 2.5/1**	**100**						

[1]*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand Grains.* [2]*Location: PL=Pore Lining, M=Matrix.*

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted)

- ☐ Histosol (A1)
- ☐ Histic Epipedon(A2)
- ■ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (LRR C)
- ☐ 1 cm Muck (A9) (LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]

- ☐ 1 cm Muck (A9) (LRR C)
- ☐ 2 cm Muck (A10) (LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (See Remarks)

[3]*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.*

Restrictive Layer (if present):

Type: **rocks encountered, but probably not continuous bedrock**

Depth (inches):

Hydric soil present? ☐ **Yes** ☐ **No**

Remarks:

Gradually tending from 10YR to 2.5Y with depth. Indicator might be A12; but definitely hydric. Rock was encountered at 10 inches, probably not solid bedrock but prevented deeper pit.

HYDROLOGY

WETLAND HYDROLOGY INDICATORS

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ■ Saturation (A3)
- ☐ Water Marks (B1) (Non-riverine)
- ☐ Sediment Deposits (B2) (Non-riverine)
- ☐ Drift Deposits (B3) (Non-riverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ■ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (see Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) *(Riverine)*
- ☐ Sediment Deposits (B2) (Riverine)
- ☐ Drift Deposits (B3) (Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	☐ Yes ☐ No	Depth (inches):	
Water Table Present?	☐ Yes ☐ No	Depth (inches):	**Wetland hydrology present?** ☐ **Yes** ☐ **No**
Saturation Present? (includes capillary fringe)	☐ Yes ☐ No	Depth (inches): **8**	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Eco Synthesis
SCIENTIFIC & REGULATORY SERVICES INC

WETLAND DETERMINATION DATA FORM: *Arid West Region*

Project/Site: **NID Mt Vernon Siphon Project**			Sampling Date: **November 24, 2010**
Applicant/Owner: **Nevada Irrigation District**			Sampling Point Number: **1**
City/County: **Placer County**		State: **California**	Investigator(s): **Adrian Juncosa**
Section, Township, Range: **Sect 31 T13N R8E**	Lat: **38.93100** Long: **121.11682**	Datum: **NAD 83**	Subregion (LRR): **C**
Sampling Point Location: **In riparian vegetation near north end of project**			Landform: **floodplain of small channel**
Soil Map Unit: **Auburn loam**		NWI classification:	Local relief: **concave** / Slope (%): **0**
Are climatic/hydrologic conditions typical for this time of year? ☐ Yes ☐ No		Are ☐ Vegetation , ☐ Soil , or ☒ Hydrology significantly disturbed?	
Are "Normal Circumstances" present? ☐ Yes ☐ No		Are ☐ Vegetation , ☐ Soil , or ☐ Hydrology naturally problematic?	

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	☐ Yes ☐ No	Sampled area within a wetland?	☐ Yes ☐ No
Hydric soil present?	☐ Yes ☐ No	Sampled area within other water of state?	☐ Yes ☐ No
Wetland hydrology present?	☐ Yes ☐ No		

Remarks:

Hydrology may be supplemented by seepage from canal, but would probably meet criterion without that.

VEGETATION

Tree Stratum (Plot size: **1500 sf** *)*	*% Abs. Cover*	*Dominant*	*Ind. Status*
Alnus rhombifolia	**10**	**Y**	**FACW**
Total cover			
Sapling/Shrub Stratum (Plot size: **1500 sf** *)*	*% Abs. Cover*	*Dominant*	*Ind. Status*
Salix lasiolepis	**50**	**Y**	**FACW**
Rubus armeniacus	**50**	**Y**	**FAC**
Total cover			
Herb Stratum (Plot size:)	*% Abs. Cover*	*Dominant*	*Ind. Status*
no herbs present			
Total cover			
Percent (%) bare ground in Herb Stratum			
Percent (%) cover of biotic crust			
Woody Vine Stratum	*% Abs. Cover*	*Dominant*	*Indicator*
Total cover			

Remarks:

Dominance Test worksheet:

Number of dominant species that are OBL, FACW, or FAC: **3** (A)

Total number of dominant species across all strata: **3** (B)

Percent of dominant species that are OBL, FACW, or FAC: **100** (A/B)

Prevalence Index worksheet:

% Total Cover

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column Totals: _____ (A) = _____ (B)

Prevalence Index: B/A = _____

Hydrophytic Vegetation Indicators:

☒ Dominance Test is >50%

☐ Prevalence Index is ≤3.0[1]

☐ Morphological Adaptations in FACU species[1]

☐ Problematic Hydrophytic Vegetation[1]

[1]*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.*

Hydrophytic vegetation present? ☐ **Yes** ☐ **No**

Sampling Point Number: **1**

SOIL

PROFILE DESCRIPTION

	Matrix		Redox Features					
Depth (inches)	*Color (moist)*	*%*	*Color (moist)*	*%*	*Type*[1]	*Loc*[2]	*Texture*	*Remarks*
0-10	**10YR 2/1**	**100**					**SiCL**	
changing to	**2.5Y 2.5/1**	**100**						

[1]*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand Grains.* [2]*Location: PL=Pore Lining, M=Matrix.*

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- ☐ Hydrogen Sulfide (A4)
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- ☐ 1 cm Muck (A9) (LRR D)
- ☐ Depleted Below Dark Surface (A11)
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- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
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- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]

- ☐ 1 cm Muck (A9) (LRR C)
- ☐ 2 cm Muck (A10) (LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (See Remarks)

[3]*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.*

Restrictive Layer (if present):

Type: **rocks encountered, but probably not continuous bedrock**

Depth (inches):

Hydric soil present? ☐ **Yes** ☐ **No**

Remarks:

Gradually tending from 10YR to 2.5Y with depth. Indicator might be A12; but definitely hydric. Rock was encountered at 10 inches, probably not solid bedrock but prevented deeper pit.

HYDROLOGY

WETLAND HYDROLOGY INDICATORS

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1) (Non-riverine)
- ☐ Sediment Deposits (B2) (Non-riverine)
- ☐ Drift Deposits (B3) (Non-riverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☑ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (see Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) *(Riverine)*
- ☐ Sediment Deposits (B2) (Riverine)
- ☐ Drift Deposits (B3) (Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	☐ Yes ☐ No	Depth (inches):	
Water Table Present?	☐ Yes ☐ No	Depth (inches):	**Wetland hydrology present?** ☐ **Yes** ☐ **No**
Saturation Present? (includes capillary fringe)	☐ Yes ☐ No	Depth (inches): **8**	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Eco Synthesis
SCIENTIFIC & REGULATORY SERVICES INC

WETLAND DETERMINATION DATA FORM: *Arid West Region*

Project/Site: **NID Mt Vernon Siphon Project**			Sampling Date: **November 24, 2010**
Applicant/Owner: **Nevada Irrigation District**			Sampling Point Number: **1**
City/County: **Placer County**		State: **California**	Investigator(s): **Adrian Juncosa**
Section, Township, Range: **Sect 31 T13N R8E**	Lat: **38.93100** Long: **121.11682**	Datum: **NAD 83**	Subregion (LRR): **C**
Sampling Point Location: **In riparian vegetation near north end of project**			Landform: **floodplain of small channel**
Soil Map Unit: **Auburn loam**		NWI classification:	Local relief: **concave** / Slope (%): **0**
Are climatic/hydrologic conditions typical for this time of year? ☐ Yes ☐ No		Are ☐ Vegetation , ☐ Soil , or ☒ Hydrology significantly disturbed?	
Are "Normal Circumstances" present? ☐ Yes ☐ No		Are ☐ Vegetation , ☐ Soil , or ☐ Hydrology naturally problematic?	

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	☐ Yes ☐ No	Sampled area within a wetland?	☐ Yes ☐ No
Hydric soil present?	☐ Yes ☐ No	Sampled area within other water of state?	☐ Yes ☐ No
Wetland hydrology present?	☐ Yes ☐ No		

Remarks:

Hydrology may be supplemented by seepage from canal, but would probably meet criterion without that.

VEGETATION

Tree Stratum (Plot size: **1500 sf** *)*	*% Abs. Cover*	*Dominant*	*Ind. Status*
Alnus rhombifolia	**10**	**Y**	**FACW**
Total cover			
Sapling/Shrub Stratum (Plot size: **1500 sf** *)*	*% Abs. Cover*	*Dominant*	*Ind. Status*
Salix lasiolepis	**50**	**Y**	**FACW**
Rubus armeniacus	**50**	**Y**	**FAC**
Total cover			
Herb Stratum (Plot size:)	*% Abs. Cover*	*Dominant*	*Ind. Status*
no herbs present			
Total cover			
Percent (%) bare ground in Herb Stratum			
Percent (%) cover of biotic crust			
Woody Vine Stratum	*% Abs. Cover*	*Dominant*	*Indicator*
Total cover			

Remarks:

Dominance Test worksheet:

Number of dominant species that are OBL, FACW, or FAC: **3** (A)

Total number of dominant species across all strata: **3** (B)

Percent of dominant species that are OBL, FACW, or FAC: **100** (A/B)

Prevalence Index worksheet:

% Total Cover

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column Totals: _____ (A) = _____ (B)

Prevalence Index: B/A = _____

Hydrophytic Vegetation Indicators:

☒ Dominance Test is >50%

☐ Prevalence Index is ≤3.0[1]

☐ Morphological Adaptations in FACU species[1]

☐ Problematic Hydrophytic Vegetation[1]

[1]*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.*

Hydrophytic vegetation present? ☐ **Yes** ☐ **No**

Sampling Point Number: **1**

SOIL

PROFILE DESCRIPTION

	Matrix		Redox Features					
Depth (inches)	*Color (moist)*	*%*	*Color (moist)*	*%*	*Type*[1]	*Loc*[2]	*Texture*	*Remarks*
0-10	**10YR 2/1**	**100**					**SiCL**	
changing to	**2.5Y 2.5/1**	**100**						

[1]*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand Grains.* [2]*Location: PL=Pore Lining, M=Matrix.*

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted)

- ☐ Histosol (A1)
- ☐ Histic Epipedon(A2)
- ☑ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (LRR C)
- ☐ 1 cm Muck (A9) (LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]

- ☐ 1 cm Muck (A9) (LRR C)
- ☐ 2 cm Muck (A10) (LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (See Remarks)

[3]*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.*

Restrictive Layer (if present):

Type: **rocks encountered, but probably not continuous bedrock**

Depth (inches):

Hydric soil present? ☐ **Yes** ☐ **No**

Remarks:

Gradually tending from 10YR to 2.5Y with depth. Indicator might be A12; but definitely hydric. Rock was encountered at 10 inches, probably not solid bedrock but prevented deeper pit.

HYDROLOGY

WETLAND HYDROLOGY INDICATORS

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1) (Non-riverine)
- ☐ Sediment Deposits (B2) (Non-riverine)
- ☐ Drift Deposits (B3) (Non-riverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☑ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (see Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) *(Riverine)*
- ☐ Sediment Deposits (B2) (Riverine)
- ☐ Drift Deposits (B3) (Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	☐ Yes ☐ No	Depth (inches):	
Water Table Present?	☐ Yes ☐ No	Depth (inches):	**Wetland hydrology present?** ☐ **Yes** ☐ **No**
Saturation Present? (includes capillary fringe)	☐ Yes ☐ No	Depth (inches): **8**	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Eco Synthesis
SCIENTIFIC & REGULATORY SERVICES INC

WETLAND DETERMINATION DATA FORM: *Arid West Region*

Project/Site: **NID Mt Vernon Siphon Project**			Sampling Date: **November 24, 2010**
Applicant/Owner: **Nevada Irrigation District**			Sampling Point Number: **1**
City/County: **Placer County**		State: **California**	Investigator(s): **Adrian Juncosa**
Section, Township, Range: **Sect 31 T13N R8E**	Lat: **38.93100** Long: **121.11682**	Datum: **NAD 83**	Subregion (LRR): **C**
Sampling Point Location: **In riparian vegetation near north end of project**			Landform: **floodplain of small channel**
Soil Map Unit: **Auburn loam**		NWI classification:	Local relief: **concave** / Slope (%): **0**
Are climatic/hydrologic conditions typical for this time of year? ☐ Yes ☐ No		Are ☐ Vegetation , ☐ Soil , or ☒ Hydrology significantly disturbed?	
Are "Normal Circumstances" present? ☐ Yes ☐ No		Are ☐ Vegetation , ☐ Soil , or ☐ Hydrology naturally problematic?	

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	☐ Yes ☐ No	Sampled area within a wetland?	☐ Yes ☐ No
Hydric soil present?	☐ Yes ☐ No	Sampled area within other water of state?	☐ Yes ☐ No
Wetland hydrology present?	☐ Yes ☐ No		

Remarks:

Hydrology may be supplemented by seepage from canal, but would probably meet criterion without that.

VEGETATION

Tree Stratum (Plot size: **1500 sf** *)*	*% Abs. Cover*	*Dominant*	*Ind. Status*
Alnus rhombifolia	**10**	**Y**	**FACW**
Total cover			
Sapling/Shrub Stratum (Plot size: **1500 sf** *)*	*% Abs. Cover*	*Dominant*	*Ind. Status*
Salix lasiolepis	**50**	**Y**	**FACW**
Rubus armeniacus	**50**	**Y**	**FAC**
Total cover			
Herb Stratum (Plot size:)	*% Abs. Cover*	*Dominant*	*Ind. Status*
no herbs present			
Total cover			
Percent (%) bare ground in Herb Stratum			
Percent (%) cover of biotic crust			
Woody Vine Stratum	*% Abs. Cover*	*Dominant*	*Indicator*
Total cover			

Remarks:

Dominance Test worksheet:

Number of dominant species that are OBL, FACW, or FAC: **3** (A)

Total number of dominant species across all strata: **3** (B)

Percent of dominant species that are OBL, FACW, or FAC: **100** (A/B)

Prevalence Index worksheet:

% Total Cover

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column Totals: _____ (A) = _____ (B)

Prevalence Index: B/A = _____

Hydrophytic Vegetation Indicators:

☒ Dominance Test is >50%

☐ Prevalence Index is ≤3.0[1]

☐ Morphological Adaptations in FACU species[1]

☐ Problematic Hydrophytic Vegetation[1]

[1]*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.*

Hydrophytic vegetation present? ☐ **Yes** ☐ **No**

Sampling Point Number: **1**

SOIL

PROFILE DESCRIPTION

	Matrix		Redox Features					
Depth (inches)	*Color (moist)*	*%*	*Color (moist)*	*%*	*Type*[1]	*Loc*[2]	*Texture*	*Remarks*
0-10	**10YR 2/1**	**100**					**SiCL**	
changing to	**2.5Y 2.5/1**	**100**						

[1]*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand Grains.* [2]*Location: PL=Pore Lining, M=Matrix.*

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted)

- ☐ Histosol (A1)
- ☐ Histic Epipedon(A2)
- ☑ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (LRR C)
- ☐ 1 cm Muck (A9) (LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]

- ☐ 1 cm Muck (A9) (LRR C)
- ☐ 2 cm Muck (A10) (LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (See Remarks)

[3]*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.*

Restrictive Layer (if present):

Type: **rocks encountered, but probably not continuous bedrock**

Depth (inches):

Hydric soil present? ☐ **Yes** ☐ **No**

Remarks:

Gradually tending from 10YR to 2.5Y with depth. Indicator might be A12; but definitely hydric. Rock was encountered at 10 inches, probably not solid bedrock but prevented deeper pit.

HYDROLOGY

WETLAND HYDROLOGY INDICATORS

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1) (Non-riverine)
- ☐ Sediment Deposits (B2) (Non-riverine)
- ☐ Drift Deposits (B3) (Non-riverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☑ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (see Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) *(Riverine)*
- ☐ Sediment Deposits (B2) (Riverine)
- ☐ Drift Deposits (B3) (Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	☐ Yes ☐ No	Depth (inches):	
Water Table Present?	☐ Yes ☐ No	Depth (inches):	**Wetland hydrology present?** ☐ **Yes** ☐ **No**
Saturation Present? (includes capillary fringe)	☐ Yes ☐ No	Depth (inches): **8**	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Eco Synthesis
SCIENTIFIC & REGULATORY SERVICES INC

WETLAND DETERMINATION DATA FORM: *Arid West Region*

Project/Site: **NID Mt Vernon Siphon Project**			Sampling Date: **November 24, 2010**
Applicant/Owner: **Nevada Irrigation District**			Sampling Point Number: **1**
City/County: **Placer County**		State: **California**	Investigator(s): **Adrian Juncosa**
Section, Township, Range: **Sect 31 T13N R8E**	Lat: **38.93100** Long: **121.11682**	Datum: **NAD 83**	Subregion (LRR): **C**
Sampling Point Location: **In riparian vegetation near north end of project**			Landform: **floodplain of small channel**
Soil Map Unit: **Auburn loam**		NWI classification:	Local relief: **concave** / Slope (%): **0**
Are climatic/hydrologic conditions typical for this time of year? ☐ Yes ☐ No		Are ☐ Vegetation , ☐ Soil , or ☒ Hydrology significantly disturbed?	
Are "Normal Circumstances" present? ☐ Yes ☐ No		Are ☐ Vegetation , ☐ Soil , or ☐ Hydrology naturally problematic?	

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	☐ Yes ☐ No	Sampled area within a wetland?	☐ Yes ☐ No
Hydric soil present?	☐ Yes ☐ No	Sampled area within other water of state?	☐ Yes ☐ No
Wetland hydrology present?	☐ Yes ☐ No		

Remarks:

Hydrology may be supplemented by seepage from canal, but would probably meet criterion without that.

VEGETATION

Tree Stratum (Plot size: **1500 sf** *)*	*% Abs. Cover*	*Dominant*	*Ind. Status*
Alnus rhombifolia	**10**	**Y**	**FACW**
Total cover			
Sapling/Shrub Stratum (Plot size: **1500 sf** *)*	*% Abs. Cover*	*Dominant*	*Ind. Status*
Salix lasiolepis	**50**	**Y**	**FACW**
Rubus armeniacus	**50**	**Y**	**FAC**
Total cover			
Herb Stratum (Plot size:)	*% Abs. Cover*	*Dominant*	*Ind. Status*
no herbs present			
Total cover			
Percent (%) bare ground in Herb Stratum			
Percent (%) cover of biotic crust			
Woody Vine Stratum	*% Abs. Cover*	*Dominant*	*Indicator*
Total cover			

Remarks:

Dominance Test worksheet:

Number of dominant species that are OBL, FACW, or FAC: **3** (A)

Total number of dominant species across all strata: **3** (B)

Percent of dominant species that are OBL, FACW, or FAC: **100** (A/B)

Prevalence Index worksheet:

% Total Cover

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column Totals: _____ (A) = _____ (B)

Prevalence Index: B/A = _____

Hydrophytic Vegetation Indicators:

☒ Dominance Test is >50%

☐ Prevalence Index is ≤3.0[1]

☐ Morphological Adaptations in FACU species[1]

☐ Problematic Hydrophytic Vegetation[1]

[1]*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.*

Hydrophytic vegetation present? ☐ **Yes** ☐ **No**

Sampling Point Number: **1**

SOIL

PROFILE DESCRIPTION

	Matrix		Redox Features					
Depth (inches)	*Color (moist)*	*%*	*Color (moist)*	*%*	*Type*[1]	*Loc*[2]	*Texture*	*Remarks*
0-10	**10YR 2/1**	**100**					**SiCL**	
changing to	**2.5Y 2.5/1**	**100**						

[1]*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand Grains.* [2]*Location: PL=Pore Lining, M=Matrix.*

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted)

- ☐ Histosol (A1)
- ☐ Histic Epipedon(A2)
- ☑ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (LRR C)
- ☐ 1 cm Muck (A9) (LRR D)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]

- ☐ 1 cm Muck (A9) (LRR C)
- ☐ 2 cm Muck (A10) (LRR B)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (See Remarks)

[3]*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.*

Restrictive Layer (if present):

Type: **rocks encountered, but probably not continuous bedrock**

Depth (inches):

Hydric soil present? ☐ **Yes** ☐ **No**

Remarks:

Gradually tending from 10YR to 2.5Y with depth. Indicator might be A12; but definitely hydric. Rock was encountered at 10 inches, probably not solid bedrock but prevented deeper pit.

HYDROLOGY

WETLAND HYDROLOGY INDICATORS

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1) (Non-riverine)
- ☐ Sediment Deposits (B2) (Non-riverine)
- ☐ Drift Deposits (B3) (Non-riverine)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☑ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (see Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) *(Riverine)*
- ☐ Sediment Deposits (B2) (Riverine)
- ☐ Drift Deposits (B3) (Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	☐ Yes ☐ No	Depth (inches):	
Water Table Present?	☐ Yes ☐ No	Depth (inches):	**Wetland hydrology present?** ☐ **Yes** ☐ **No**
Saturation Present? (includes capillary fringe)	☐ Yes ☐ No	Depth (inches): **8**	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Appendix D

Grant Agreement 07FG20098 – FY 2007 Challenge Grant Program, Combie-Ophir IV Canal: Increasing Water Efficiency in the Sierra Nevada Foothill Region

MP-3813
ADM-13.00

SEP 2 6 2007

Mr. Adrian Schneider, PE,
Associate Engineer
Nevada Irrigation District
1036 West Main Street
Grass Valley, CA 95945

Subject: Grant Agreement 07FG200098 – FY 2007 Challenge Grant Program, Combie-Ophir IV Canal: Increasing Water Efficiency in the Sierra Nevada Foothill Region

Dear Mr. Schneider:

Enclosed for your records is a fully executed original of the subject agreement.

The Grant and Cooperative Agreements Officer's Representative (GCAOR) for this agreement is Ms. Laurie Sharp of the Mid-Pacific Regional Office in Sacramento, California. Ms. Sharp can be reached at (916)978-5200. A letter delineating the GCAOR's responsibilities is also enclosed. You are requested to acknowledge receipt by signing and returning one copy to this office, Attention: Maria Castaneda, MP-3813. The second copy should be retained for your files.

Should you have any questions regarding this agreement, please contact the undersigned at (916) 978-5148 (TDD 978-5608).

Sincerely,

Maria E. Castaneda
Grant and Cooperative
Agreements Officer

Enclosures (2)

1. Grant Agreement 07FG200098
2. GCAOR Appointment Letter (in duplicate)

bc: MP-410 (S. Looper)(w/cy encl)
MP-400 (L. Sharp) (w/cy encl) ✓
MP-3200 (w/cy encl)

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

ASSISTANCE AGREEMENT

1. AGREEMENT NUMBER	2. TYPE OF AGREEMENT	3. CLASS OF RECIPIENT
07FG200098	[X] GRANT [ ] COOPERATIVE AGREEMENT	Municipal

4. ISSUING OFFICE (NAME, ADDRESS)
U.S. Department of the Interior
Bureau of Reclamation
Mid-Pacific Region
2800 Cottage Way, Room E-1815
Sacramento, California 95825-1898

5. RECIPIENT (NAME, ADDRESS, TELEPHONE)
Nevada Irrigation District Ph: (530) 271-6839
1036 West Main Street
Grass Valley CA 95945

DUNS: 047-88-3061 EIN: 94-6003853

6. ADMINISTRATIVE POINT OF CONTACT (NAME, ADDRESS, TELEPHONE, E-MAIL)
Maria E. Castaneda, MP-3813 Phone: (916) 978-5148
Bureau of Reclamation Fax: (916) 978-5175
Acquisition Services
2800 Cottage Way, Room E-1815
Sacramento, California 95825-1898
Email mcastaneda@mp.usbr.gov

7. RECIPIENT PROJECT MANAGER (NAME, ADDRESS, TELEPHONE, E-MAIL)
Mr. Adrian Schneider, PE, Assoc. Eng. Ph: (530) 271-6839
Nevada Irrigation District
1036 West Main Street
Grass Valley CA 95945
Email: Schneider@nid.dst.ca.us

8. TECHNICAL REPRESENTATIVE (NAME, ADDRESS, TELEPHONE, E-MAIL)
Ms. Laurie Sharp, MP-400 Phone (916) 978-5200
Bureau of Reclamation Fax (916) 978-5290
Mid Pacific Regional Office
2800 Cottage Way
Sacramento CA 95825
Email: lsharp@mp.usbr.gov

9. EFFECTIVE DATE
SEE BLOCK 17

10. COMPLETION DATE
November 30, 2010

11. PROGRAM STATUTORY AUTHORITY
Energy and Water Development Appropriations Act, Public Law 109-103, Section 205, dated November 19, 2005 and Public Law 110-5, Section 104, 4th C.R. through September 30, 2007

12. FUNDING INFORMATION	RECIPIENT/OTHER	RECLAMATION
TOTAL AMOUNT OF THE AGREEMENT	$763,000.00	$300,000.00*
AMOUNT OF FUNDS OBLIGATED	$	$300,000.00*
COST SHARE RATIO	72%	28%

***Refer to para. A.9, page 3, for information regarding these funding amounts.**

13. REQUISITION NUMBER
07205000136

14. ACCOUNTING AND APPROPRIATION DATA
A10 1968 0006 NID CA 7 0 2050400 411G(8DIRFR2) $290,000.00
A10 1968 0006 NID CA 7 E 2050400 411G(8DIRFR2) $ 10,000.00

15. PROJECT TITLE AND BRIEF SUMMARY OF PURPOSE AND OBJECTIVES OF PROJECT
a. TITLE: Water 2025 – Combie-Ophir IV Canal: Increasing Water Efficiency in the Sierra Nevada Foothill Region

(Block 15 continued on Page 2)

16a. *Acceptance of this Assistance Agreement in accordance with the terms and conditions contained herein is hereby made on behalf of the above-named recipient*
BY _____ TEDA

17a. *Acceptance of this Assistance Agreement in accordance with the terms and conditions contained herein is hereby made on behalf of the United States of America, Bureau of Reclamation*
BY _____ TEDA 9-26-07

16b. NAME, TITLE, AND TELEPHONE NUMBER OF SIGNER (Type or print)
ADRIAN N. SCHNEIDER
SENIOR ENGINEER
530 271-6839

☐ *Additional signatures are attached*

17b. NAME OF GRANTS AND COOPERATIVE AGREEMENTS OFFICER (Type or print)
Maria E. Castaneda

DOCUMENTS INCORPORATED HEREIN BY REFERENCE:

A.1. BACKGROUND

Water is the lifeblood of the American West and the foundation of its economy. More than a century ago, American pioneers began harnessing the water of the West, operating vast new lands for settlement and development. Today, the American West is the fastest growing region of the country, and water is its scarcest resource.

Water 2025: Preventing Crisis and Conflict in the West is intended to focus attention on the reality that explosive population growth in western urban areas, the emerging need for water for environmental and recreational uses, and the national importance of the domestic production of food and fiber from western farms and ranches are driving major conflicts between these competing uses of water.

Today, in some areas of the West, existing water supplies are, or will be, inadequate to meet the water demands of people, cities, farms, and the environment even under normal water supply conditions.

Water 2025, recognizes that state and local governments should have a leading role in meeting these challenges, and that the Department of the Interior (Department) should focus its attention and existing resources on areas where scarce federal dollars can provide the greatest benefits to the West and the rest of the Nation.

The mission of the Bureau of Reclamation (Reclamation) is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

This Proposal is submitted under Task Area C – Canal Lining.

A.2. PURPOSE

The Combie-Ophir IV Canal is the main artery for the water system supplying the town of Auburn, California and delivers raw water to several different canal systems in the southern portion of the Nevada Irrigation District's service area. The proposed project will convert the majority of the earthen Combie-Ophir IV Canal with a 24-inch siphon pipeline, which will in the short-term make more water available in the water basin through increased water conservation and increased water delivery efficiency for agriculture, domestic, and municipal purposes. In the long-term, the proposed project will make more water available to accommodate the anticipated population growth in the Sierra Nevada foothill region as well as provide water security downstream in the California Bay-Delta area. Given the existing size and condition of the Combie-Ophir IV Canal, the future flow capacity will not be attainable unless an alternative delivery approach is implemented.

The Nevada irrigation district serves 23,000 water users and the current total system water demand is approximately 152,000 acre-feet per year. By 2027, total system demands are expected to approach the average annual watershed runoff volume and will result in a greater reliance on management of carry-over storage, conservation, and purchased water, particularly if there are dry years or periods of prolonged drought.

Implementation of the proposed project will address the deficiencies associated with the aging Nevada Irrigation District canal system, which include reduced capacity, slope instabilities, limited freeboard, limited access for maintenance, and seepage losses. The proposed project will result in a more efficient and better maintained water delivery system for the Nevada Irrigation District, which will ultimately reduce future water conflicts for the region. The primary purpose of the proposed project is to increase the capacity and reliability of raw water delivery to customers and to ensure that deliveries can meet anticipated future demands within the Combie-Ophir IV Canal service area.

A.3. OBJECTIVE

The proposed project will lead to increased water marketing opportunities in Placer County, the fastest growing county in the Sierra Nevada region of California, through conservation and better management of the delivery system to the region. The Combie-Ophir IV Canal is the main artery for the water system supplying the town of Auburn, California and delivers raw water to several different canal systems in the southern portion of the Nevada

Irrigation District's service area. The mechanism will be the voluntary movement of domestic and potable water, both raw and treated, to the existing market through individual retail and wholesale accounts. The Nevada Irrigation District does not participate in a water market – they do purchase water from Pacific Gas & Electric to sell to South Sutter Water District.

The estimated amount of water that will be marketed is 10,941 acre-feet. The scope of the water market involved includes 5,400 users of raw water. Ninety percent (90%) of the water market is used for local agriculture, mainly from mid-April through mid-October. Water is also used for municipal, domestic, recreation, and power generation purposes.

The District only provides water within its service territory due to their water rights. These rights are confined by territory as determined by the formation documentation of the Nevada Irrigation District. There are no restrictions to marketing under Reclamation laws or contracts, individual project authorities. The District is governed by the terms and conditions of California water rights and the California Water Code.

A.4. BENEFITS

The proposed project will significantly increase water delivery and efficiency to customers in Placer County by the Nevada Irrigation District, through increased water conservation, better water management, and water system reliability. The pre-project water delivery for the Combie-Ophir IV Canal is 10,710 acre-feet per year. This calculation was made according to data supplied by the District's operations records kept on measuring weirs throughout the water delivery system. Pre-project losses in the transport system were estimated from weir readings taken on August 2, 2005. The estimated direct project benefit includes the conservation of 231 acre-feet per year of water for a period of 50 years. The estimated indirect project benefits include the re-allocation of the conserved water to additional storage, additional water being made available to customers, and increased delivery system reliability over the long-term.

A.5. RESPONSIBILITIES OF THE PARTIES

A.5.1. THE RECIPIENT

Under this agreement, **Nevada Irrigation District** shall:

Reference **Revised Nevada Irrigation District** proposal **dated May 5, 2006.** This proposal is incorporated by reference and made a part of this agreement.

A.5.2. THE BUREAU OF RECLAMATION

Reclamation shall be responsible for oversight of the Project and the use of Reclamation grant funds in the amount of $300,000.00.

A.6. STATEMENT OF WORK -

See Section A.5. Responsibilities of the Parties.

A.7. PERFORMANCE PERIOD

The performance period of this agreement is from date of award to November 30, 2010.

A.8. FUNDING

Reclamation will make advanced payments or reimburse the recipient for allowable costs incurred, in accordance with applicable OMB Circular during the effective period of this agreement. Please reference Special Provision B.1 Payment Policy of this agreement.

(a) **SUMMARY OF FUNDING ESTIMATES**.

The following is a summary of the funding periods of the agreement, and the amounts of funding (either estimated or costs actually incurred) for those periods:

Period No.	Dates Covered	Estimated/Actual Costs
1.	Date of execution (Award) through September 30, 2007	$300,000.00 (act.)
2.	October 1, 2007 through September 30, 2008	$ 0.00*
3.	October 1, 2008 through September 30, 2009	$ 0.00*
4.	October 1, 2009 through September 30, 2010	$ 0.00*
5.	October 1, 2010 through November 30, 2010	$ 0.00*
	TOTAL ESTIMATED AMOUNT	$300,000.00 (act.)

It is understood that any estimated amounts are not binding on either party and are for informational purposes only, until such time as a modification is issued to provide funding for that period.

(b) **SUMMARY OF FUNDING OBLIGATIONS**. The following is a summary of the funding that has been **obligated** for this agreement:

Period #	Accounting and Appropriation Data	Amount
1.	A10 1968 0006 NID CA 7 0 2050400 411G (8DIRFR2)	$290,000.00
1.	A10 1968 0006 NID CA 7 E 2050400 411G (8DIRFR2) (Basic Agreement)	$ 10,000.00
	TOTAL OBLIGATED AMOUNT	**$300,000.00**

The Government is under no obligation to provide funds in addition to those reserved in writing. Except as required by other provisions of this Agreement specifically citing and to be an exemption from this clause, Reclamation shall not be obligated to reimburse the Recipient for costs incurred in excess of the estimated cost set forth in the approved annual budget.

Unexpended **obligated funds from previous fiscal years may also be made available for costs incurred during this period.*

A.9. FUNDING INFORMATION

The recipient has requested Reclamation funding in the amount of **$300,000.00** for this project: however, the amount of funding currently being obligated has been reduced by **$10,000.00** from **$300,000.00** to **$290,000.00**, to provide for the expenses Reclamation has incurred while performing the regulatory compliance reviews requested by the recipient.

A.10. ENVIRONMENTAL INFORMATION

CEQA and NEPA compliance remain incomplete. Reclamation can not move forward with environmental review until NID provides Reclamation the appropriate level of CEQA documentation. NID shall submit a draft CEQA document for Reclamation review to determine the level of NEPA analysis required before moving forward with a completed CEQA/NEPA document. All necessary permits must be obtained prior to Reclamation approval. NID must consult with appropriate regulatory agencies to include US Army Corp of Engineers, California Department of Fish and Game, US Fish and Wildlife Service, and California Water Quality Control Board.

When CEQA/NEPA draft documentation is complete, CCAO will forward to the Reclamation Regional Office for cultural review and consultation with the State Historic Preservation Office as necessary.

NID must determine the time, cost, and workload involved to complete environmental review. The amount of time to complete NEPA review is dependent on the draft CEQA document to be submitted by NID.

Obtaining necessary environmental permits such as CWA 404, 401 and 402 permits and completing consultation with regulatory agencies as required under section 7 of ESA and section 106 of NHPA can potentially take years to complete.

Mitigation measures have not yet been determined. NID shall coordinate with Reclamation on appropriate mitigation measures once the draft CEQA document has been submitted.

The draft CEQA document must be prepared by a qualified environmental interdisciplinary team. If NID does not have the appropriate in-house expertise, they must hire a consultant/contractor to prepare necessary environmental documentation.

NID must provide Reclamation with one qualified environmental specialist to act as a project manager for environmental compliance and liaison with the Reclamation environmental coordinator.

A.11. PROPERTY AND EQUIPMENT TO BE FURNISHED BY THE GOVERNMENT - N/A

The equipment identified in **Attachment** is furnished to the Recipient under this Grant/Cooperative Agreement. Procedures for managing equipment (including replacement equipment), whether acquired in whole or in part with funding from this Grant/ Cooperative Agreement, until disposition takes place will, as a minimum, meet the following requirements, or those of the applicable OMB Circular:

(1) Property records must be maintained that include a description of the property, a serial number or other identification number, the source of property, who holds title, the acquisition date, and cost of the property, percentage of Federal participation in the cost of the property, the location, use and condition of the property, and any ultimate disposition data including the date of disposal and sale price of the property.

(2) A physical inventory of the property must be taken and the results reconciled, and provided to the GCAOR (at the address below), with the property records at least once every two years.

(3) In accordance with the applicable OMB Circular, the Recipient shall request disposition instructions for any and all items of equipment with a current per unit fair market value in excess of $5,000. Said disposition shall be forwarded to the address below no later than 30 days after completion of the period of performance.

U.S. Department of the Interior
Bureau of Reclamation, Mid-Pacific Region
Attn: Grants and Cooperative Agreements Officer
2800 Cottage Way, Room E-1815
Sacramento, California 95825-1898

SPECIAL PROVISIONS (06/06)

B.1 PAYMENT POLICY (Reclamation 11/03)

Acceptance of a financial assistance agreement from Reclamation creates a legal responsibility on the part of the recipient organization to use the funds and property provided in accordance with the terms and conditions of the agreement. Reclamation has a reversionary interest in the unused balance of funding and in any funds improperly applied.

Payments to recipients are made in accordance with the basic standards and methods stated in the payment regulations at 43 CFR 12.61 or 43 CFR 12.922, as applicable to this agreement. These requirements are intended to minimize the time elapsing between the transfer of funds from the Federal government and the disbursement of these funds by the recipient.

Payment will be made in advance or by reimbursement as follows:

(1) Advance Payment -- Recipients shall be paid in advance provided (1) they maintain or demonstrate the willingness and ability to maintain procedures to minimize the time elapsing between the transfer of funds and

their disbursement by the recipient, (2) they comply with reporting requirements for timely submission of financial status reports, and (3) they impose these same standards on sub-recipients.

Advances to recipients shall be limited to the minimum amounts needed and shall be timed to be in accordance with the actual, immediate cash requirements of the recipient in carrying out the purpose of the agreement. The timing and amount of cash advances shall be as close as administratively feasible (generally no more than 3 days) to actual disbursements for direct program costs and the proportionate share of allowable indirect costs.

(2) Reimbursement -- Reimbursement shall be the preferred method of payment when a recipient (1) does not meet the requirements for advance payment stated above; (2) does not have financial management systems that meet the standards in 43 CFR 12.60 or 43 CFR 12.921, as applicable; or (3) has been converted to payment restrictions for non-compliance with the terms and conditions of the agreement. Reimbursement is also the preferred method of payment for agreements involving construction.

B.2 PAYMENT METHOD (Reclamation 11/03)

Electronic Funds Transfer -- Payments under this agreement will be made to recipients by electronic funds transfer (EFT) unless the recipient qualifies for exemption from this payment method. Reclamation utilizes the Automated Clearinghouse (ACH) Vendor Express payment system for EFT. Whether funds are paid in advance or as a reimbursement, the actual payment will be made through Vendor Express. Vendor Express allows the Government to transfer funds to a recipient's financial institution along with explanatory information regarding the payment.

Enrollment -- Upon award, recipients will receive a copy of the SF-3881, ACH Vendor/Miscellaneous Payment Enrollment Form. This form is required to implement the Vendor Express system and to notify Reclamation of any change or corrections to financial institution information.

Requesting Payments -- Requests for advance or reimbursement may be made by the following methods:

(1) SF-270, Request for Advance or Reimbursement -- On a monthly basis, recipients may submit an original and two copies of a properly certified SF-270 form to the address identified in ***Block 4, page 1***, of this agreement. For advance payments, this form may be submitted on a **monthly** basis, at least two weeks prior to the date on which funds are required, and on the basis of expected disbursements for the succeeding month and the amount of Federal funds already on hand. Requests for reimbursement may be submitted on a monthly basis, or more frequently if authorized by the Grant and Cooperative Agreements Officer (GCAO). Requested funds are delivered to the recipient via ACH Vendor Express. This form is available on the Internet at http://www.whitehouse.gov/omb/grants/grants_forms.html.

(2) SF-271, Outlay Report and Request for Reimbursement for Construction Programs -- The SF-271 shall be used for construction agreements paid by the reimbursement method, letter of credit, electronic funds transfer, or Treasury check advance, except where the advance is based on periodic requests from the recipient, in which case the SF-270 shall be used. This request may be submitted on a quarterly basis, but no less frequently than on an annual basis. Recipients may submit an original and two copies of a properly certified SF-271 form to the address identified in ***Block 4, page 1***, of this agreement. This form is available on the Internet at http://www.whitehouse.gov/omb/grants/grants_forms.html.

(3) Automated Standard Application for Payments (ASAP) -- Recipients may utilize the Department of Treasury ASAP payment system to request advances or reimbursements. ASAP is a recipient-initiated payment and information system designed to provide a single point of contact for the request and delivery of Federal funds. Once a request is made through ASAP, funds are provided to the recipient either through ACH or Fedwire. Further information regarding ASAP may be obtained from the ASAP website at http://www.fms.treas.gov/asap. Upon award, you will be provided with information regarding enrollment in the ASAP system.

B.3 REPORTING REQUIREMENTS AND DISTRIBUTION (Reclamation 11/03)

Failure to comply with the reporting requirements contained in this agreement may be considered a material non-compliance with the terms and conditions of the award. Non-compliance may result in withholding of payments pending receipt of required reports, denying both the use of funds and matching credit for all or part of the cost of the activity or action not in compliance, whole or partial suspension or termination of the agreement, recovery of funds paid under the agreement, withholding of future awards, or other legal remedies.

(1) Financial Reports -- All financial reports shall be signed by an Authorized Certifying Official for the recipient's organization. The following forms are available at http://www.whitehouse.gov/omb/grants/grants_forms.html.

(a) SF-269 or SF-269a, Financial Status Report - This form is utilized to report total expenditures for the reporting period. The SF-269 must be used if the recipient is accountable for the use of program income; otherwise, the SF-269a may used.

An original and two copies of this form shall be submitted ***quarterly*** within 30 days following the end of each reporting period. A final SF-269 or SF-269a shall be submitted within 90 days following completion of the agreement.

(b) SF-272, Report of Federal Cash Transactions -- This report shall be submitted by recipients that draw down cash advances by means of electronic funds transfer or Treasury check. Recipients shall identify in the "Remarks" section the amount of cash advances received in excess of 3 days prior to disbursement and explain actions taken to reduce excess balances.

An original and two copies of this form shall be submitted on a ***monthly*** (but only for those organizations receiving advances of $1 million or more per year)] basis within 15 days following the end of the reporting period

(2) Program Performance Reports

(a) Interim Reports -- Recipients shall submit an original and two copies of program performance reports on a ***quarterly*** basis within 30 days following the end of each reporting period. Program performance reports shall contain the following:

(i) A comparison of actual accomplishments with the goals and objectives established for the reporting period;

(ii) Where project output can be quantified, a computation of the cost per unit of output;

(iii) When appropriate, reasons why goals and objectives were not met; and
(iv) Other pertinent information including, when appropriate, analysis and explanation of cost overruns or high unit costs.

(b) Annual Reports - An original and two copies of an annual program performance report shall be submitted within 90 days following the end of each year of the agreement. Copies of this report may be required to be included with any application for continuing support of the agreement.

(c) Final Report - An original and two copies of the final program performance report shall be submitted no later than 90 days following the expiration or termination of the agreement.

(3) Significant Developments

During the term of the agreement, the recipient must immediately notify the GCAO if any of the following conditions become known:

(a) Problems, delays or adverse conditions which will materially impair their ability to meet the objectives of the agreement;

(b) Favorable developments which enable the recipient to meet time schedules and objectives sooner than or at less cost than projected or to produce more beneficial results than originally planned.

This notification is to include information on the actions taken or contemplated to resolve problems, delays, or adverse conditions, and any assistance needed from Reclamation to help resolve the problem.

(4) Report Distribution

Copies of reports shall be distributed as follows:

	GCAO (Block 6, Page 1)	GCAOR (Block 8, Page 1)
Financial Reports	2	1
Performance Reports	1	2
Significant Developments	2	1

B.4 MODIFICATIONS (Reclamation 08/03)

Any changes to this agreement shall be made by means of a written modification. Reclamation may make changes to the agreement by means of a unilateral modification to deal with administrative matters, such as changes in address, no-cost time extensions, the addition of previously agreed upon funding, or deobligation of excess funds at the end of the agreement. Additionally, a unilateral modification may be utilized by Reclamation if it should become necessary to suspend or terminate the agreement in accordance with 43 CFR 12.83 or 43 CFR 12.961, as applicable.

All other changes shall be made by means of a bilateral modification to the agreement. No oral statement made by any person, or written statement by any person other than the GCAO, shall be allowed in any manner or degree to modify or otherwise effect the terms of the Agreement.

All requests for modification of the Agreement shall be made in writing, provide a full description of the reason for the request, and be sent to the attention of the GCAO. Any request for project extension shall be made at least 45 days prior to the expiration date of the agreement or the expiration date of any extension period that may have been previously granted. Any determination to extend the period of performance or to provide follow-on funding for continuation of a project is solely at the discretion of Reclamation.

B.5. RECIPIENT'S PROJECT MANAGER (Reclamation 08/03)

The Recipient's Project Manager for this Agreement shall be **Mr. Adrian Schneider, PE, Associate Engineer.**

B.6. KEY PERSONNEL (Reclamation 02/07)

The Recipient's key personnel for this agreement are identified as follows:

Mr. Adrian Schneider, (530) 271-6839.

In accordance with 43 CFR 12.70(d)(3) or 43 CFR 12.925, as applicable, the Recipient shall request prior approval from Reclamation before making any changes in the key personnel identified above.

B.7. GRANT AND COOPERATIVE AGREEMENT OFFICER'S REPRESENTATIVE (GCAOR) (Reclamation 08/03)

The GCAOR for this agreement will be:

Bureau of Reclamation
Mid-Pacific Regional Office
Attn: **Ms. Laurie Sharp**
2800 Cottage Way
Sacramento CA 95825
Telephone: (916) 978-5200

The GCAOR is authorized to act only on technical matters during the term of this Agreement. The GCAOR and the Recipient's Project Manager shall work closely to ensure that all requirements of the Agreement are being met. The GCAOR's responsibilities include, but are not limited to, the following:

(a) Assist the Recipient concerning the accomplishment of the tasks described in the Agreement;

(b) Provide information to the Recipient which assists in the interpretation of the tasks; and

(c) Review, and where required, approve reports and information to be delivered to the Government.

Technical assistance must be within the general scope of the Agreement. The GCAOR does not have the authority to and may not issue any technical assistance which:

(a) Constitutes an assignment of additional work outside the general scope of the Agreement;

(b) In any manner causes an increase or decrease in the total estimated cost or the time required for performance; or

(c) Changes any of the expressed terms, conditions, or specifications.

B.8. FUNDS AVAILABLE FOR PAYMENT (Reclamation 08/03)

The Government's obligation under this Agreement is contingent upon the availability of appropriated funds from which payment for Agreement purposes can be made. No legal liability on the part of the Government for any payment may arise until funds are made available to the GCAO for this Agreement, and until the Recipient receives notice of such availability, to be confirmed in writing to the Recipient by the GCAO.

Pursuant to the Act of Congress of June 17, 1902 (32 Stat. 388), and acts amendatory thereof or supplementary thereto, all commonly known as Reclamation Law, funds for payment under the first year of this agreement are included in the **fiscal year 2007** Energy and Water Development Appropriations Act, Public Law 110-5, 4th Continuing Resolution. Funding for any optional year of the agreement is contingent upon subsequent Congressional funding.

B.9 REIMBURSABLE COSTS AND LIMITATIONS (Reclamation 08/03)

B.9.1 The Recipient shall provide all personnel, services, facilities, equipment, materials and supplies, and perform all travel which may be necessary and appropriate for the proper performance of this Agreement. Costs so incurred will be paid for as provided herein. Reclamation's obligation to provide funding to the Recipient for costs incurred in these connections shall be limited to the Recipient's direct and indirect costs associated with this Agreement. All such direct and indirect costs must be determined to be allowable under the regulations contained in 48 CFR Subpart 31.2 or an OMB Cost Principle Circular, as applicable, which are incorporated herein through the General Provisions of this agreement.

B.9.2 The recipient shall not incur costs or obligate funds for any purpose pertaining to operation of the program or activities beyond the expiration date stated in the agreement. The only costs, which are authorized for a period of up to 90 days following the award expiration date are those strictly associated with closeout activities for preparation of the final report.

B.9.3 Reclamation shall not be obligated to provide funding to the Recipient and the Recipient shall not be obligated to continue performance under the Agreement or to incur costs in excess of the costs set forth in the

annual project budget unless the GCAO has furnished the Recipient a modification to increase the available funding for the Agreement.

B.10 BUDGET REVISIONS (Reclamation 08/03)

The Recipient shall follow the requirements at 43 CFR 12.70(c) or 43 CFR 12.925, as applicable, when making revisions to budget and program plans. Additionally, approval shall be requested for transfers of amounts budgeted for indirect costs to absorb increases in direct costs, or vice versa.

B.11 PROCUREMENT STANDARDS (Reclamation 08/03)

When utilizing Federal funds for the procurement of supplies and other expendable property, equipment, real property, and other services under this agreement, the Recipient shall utilize the Procurement Standards set forth at 43 CFR 12.76 or 43 CFR 12.940 -12.948, as applicable. The Recipient may be required to submit evidence that its procurement procedures are in compliance with the standards stated therein. Additional guidance for contracting with small and minority firms and women's business enterprises is included in the General Provisions section of this agreement.

B.12 PROPERTY STANDARDS (Reclamation 08/03)

All property, equipment and supplies acquired by the Recipient with Federal funds shall be subject to usage, management, and disposal in accordance with the Property Standards at 43 CFR 12.72 - 12.73, or 43 CFR 12.930 - 12.937, as applicable.

B.13 PROPERTY STANDARDS - REAL PROPERTY (Reclamation 08/03)

In accordance with 43 CFR 12.71 or 43 CFR 12.932, as applicable, if real property is acquired in whole or in part under this agreement, it shall be subject to the following regulations:

B.13.1 Title -- Title to real property acquired under this agreement shall vest upon acquisition in the Recipient or Sub-recipient, shall be used for the originally authorized purpose of the project as long as it is needed, and shall not be disposed of or encumbered without Reclamation approval.

B.13.2 Disposition -- When the real property is no longer needed for the originally authorized purpose, the Recipient or Sub-recipient shall request disposition instructions from Reclamation. The instructions shall provide for one of the following alternatives:
B.13.2.1 Transfer -- The Recipient may be permitted to transfer the property to another Federally-sponsored project if the Recipient determines that the property is no longer needed for the purpose of the original project. Use in other projects or programs shall be limited to those that have purposes consistent with those authorized for support by the Department of the Interior.

B.13.2.2 Retention of Title -- The Recipient may be allowed to retain the title after compensating Reclamation for that percentage of the current fair market value of the property attributable to the Federal government's financial participation in the project.

B.13..2.3 Sale of Property -- The Recipient may be directed to sell the property under guidelines provided by Reclamation, and to compensate Reclamation in an amount calculated by applying Reclamation's percentage of participation in the cost of the original purchase to the proceeds of the sale after deduction of any actual and reasonable selling and fix-up expenses. When the Recipient is directed to sell the property, sales procedures shall be followed that provide for competition to the extent practicable and result in the highest possible return.

B.13.2.4 Transfer of Title The Recipient may be directed to transfer title to the Federal Government or to an eligible third-party. The Recipient shall be entitled to compensation for its attributable percentage of the current fair market value of the property.

B.14 INSPECTION (Reclamation 08/03)

Reclamation has the right to inspect and evaluate the work performed or being performed under this agreement, and the premises where the work is being performed, at all reasonable times and in a manner that will not unduly delay the work. If Reclamation performs inspection or evaluation on the premises of the Recipient or a sub-recipient, the Recipient shall furnish and shall require sub-recipients to furnish all reasonable facilities and assistance for the safe and convenient performance of these duties.

B.15 AUDIT (Reclamation 01/04)

Non-Federal entities that expend $300,000 ($500,000 for fiscal years ending after December 31, 2003) or more in a year in Federal awards shall have a single or program-specific audit conducted for that year in accordance with the Single Audit Act Amendments of 1996 (31 U.S.C. 7501-7507) and revised OMB Circular A-133, which is available at http://www.whitehouse.gov/omb/grants/grants_circulars.html. Federal awards are defined as Federal financial assistance and Federal cost-reimbursement contracts that non-Federal entities receive directly from Federal awarding agencies or indirectly from pass-through entities. They do not include procurement contracts, under grants or contracts, used to buy goods or services from vendors. Non-Federal entities that expend less than $300,000 ($500,000 for fiscal years ending after December 31, 2003) a year in Federal awards are exempt from Federal audit requirements for that year, except as noted in A-133, §_215(a), but records must be available for review or audit by appropriate officials of the Federal agency, pass-through entity, and General Accounting Office (GAO).

Audits shall be made by an independent auditor in accordance with generally accepted government auditing standards covering financial audits. Additional audit requirements applicable to this agreement are found at 43 CFR 12.66 or 43 CFR 12.926, as applicable. General guidance on the single audit process is included in a pamphlet titled, "Highlights of the Single Audit Process" which is available on the internet at http://www.dot.gov/ost/m60/grant/sincontact.htm . Additional information on single audits is available from the Federal Audit Clearinghouse at http://harvester.census.gov/sac/ .

B.16 ENFORCEMENT (Reclamation 08/03)

In accordance with 43 CFR 12.83 or 43 CFR 12.962, as applicable, if the recipient materially fails to comply with any term of this agreement, whether stated in a Federal statute or regulation, an assurance, in a State plan or application, a notice of award, or elsewhere, Reclamation may take one or more of the following actions as appropriate:

B.16.1 Temporarily withhold cash payments pending correction of the deficiency by the recipient or sub-recipient or more severe enforcement action by the awarding agency;
B.16.2 Disallow (deny both use of funds and any matching credit for) all or part of the cost of the activity or action not in compliance;

B.16.3 Wholly or partly suspend or terminate the current award for the recipient's or sub-recipient's program;

B.16.4 Withhold further awards for the program; or

B.16.5 Take other remedies that may be legally available.

B.17 TERMINATION (Reclamation 08/03)

In accordance with 43 CFR 12.84 or 43 CFR 12.961, as applicable, and except as provided for in the Enforcement Provision, above, this agreement may be terminated in whole or part only as follows:

B.17.1 By the awarding agency with the consent of the recipient or sub-recipient in which case the two parties shall agree upon the termination conditions, including the effective date and in the case of partial termination, the portion to be terminated, or

B.17.2 By the recipient or sub-recipient upon written notification to Reclamation, setting forth the reasons for such termination, the effective date, and in the case of partial termination, the portion to be terminated. However, if, in the case of a partial termination, the awarding agency determines that the remaining portion of the award will not accomplish the purposes for which the award was made, the awarding agency may terminate the award in its entirety under either the Enforcement Provision or paragraph 1 of this Provision.

B.18 PATENTS AND INVENTIONS (Reclamation 08/03)

The administrative standards set forth in OMB Circular A-102 and OMB Circular A-110, as implemented by 43 CFR 12.936(b), require recipients of agreements which support experimental, developmental, or research work to be subject to applicable regulations governing patents and inventions, including the government-wide regulations issued by the Department of Commerce at 37 CFR 401, Rights to Inventions Made by Non-profit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements. These regulations do not apply to any agreement made primarily for educational purposes.

In accordance with 37 CFR 401.3(a), the provision at 37 CFR 401.14(a), with authorized modifications for the Bureau of Reclamation, is hereby included in this agreement:

PATENT RIGHTS

(a) Definitions

(1) *Invention* means any invention or discovery which is or may be patentable or otherwise protectable under Title 35 of the United States Code, or any novel variety of plant which is or may be protected under the Plant Variety Protection Act (7 U.S.C. 2321 et seq.).

(2) *Subject invention* means any invention of the recipient conceived or first actually reduced to practice in the performance of work under this agreement, provided that in the case of a variety of plant, the date of determination (as defined in section 41(d) of the Plant Variety Protection Act, 7 U.S.C. 2401(d)) must also occur during the period of agreement performance.

(3) *Practical Application* means to manufacture in the case of a composition or product, to practice in the case of a process or method, or to operate in the case of a machine or system; and, in each case, under such conditions as to establish that the invention is being utilized and that its benefits are, to the extent permitted by law or government regulations, available to the public on reasonable terms.

(4) *Made* when used in relation to any invention means the conception or first actual reduction to practice of such invention.

(5) *Small Business Firm* means a small business concern as defined at section 2 of Pub. L. 85-536 (15 U.S.C. 632) and implementing regulations of the Administrator of the Small Business Administration. For the purpose of this provision, the size standards for small business concerns involved in government procurement and subcontracting at 13 CFR 121.3-8 and 13 CFR 121.3-12, respectively, will be used.

(6) *Nonprofit Organization* means a university or other institution of higher education or an organization of the type described in section 501(c)(3) of the Internal Revenue Code of 1954 (26 U.S.C. 501(c) and exempt from taxation under section 501(a) of the Internal Revenue Code (25 U.S.C. 501(a)) or any nonprofit scientific or educational organization qualified under a state nonprofit organization statute.

(b) Allocation of Principal Rights

The Recipient may retain the entire right, title, and interest throughout the world to each subject invention subject to this provision and 35 U.S.C. 203. With respect to any subject invention in which the Recipient retains title, the Federal government shall have a nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States the subject invention throughout the world.

(c) Invention Disclosure, Election of Title and Filing of Patent Application by Recipient

(1) The Recipient will disclose each subject invention to the Bureau of Reclamation within two months after the inventor discloses it in writing to Recipient personnel responsible for patent matters. The disclosure to the Bureau of Reclamation shall be in the form of a written report and shall identify the agreement under which the invention was made and the inventor(s). It shall be sufficiently complete in technical detail to convey a clear

understanding to the extent known at the time of the disclosure, of the nature, purpose, operation, and the physical, chemical, biological or electrical characteristics of the invention. The disclosure shall also identify any publication, on sale or public use of the invention and whether a manuscript describing the invention has been submitted for publication and, if so, whether it has been accepted for publication at the time of disclosure. In addition, after disclosure to the Bureau of Reclamation, the Recipient will promptly notify the Bureau of Reclamation of the acceptance of any manuscript describing the invention for publication or of any on sale or public use planned by the Recipient.

(2) The Recipient will elect in writing whether or not to retain title to any such invention by notifying the Bureau of Reclamation within two years of disclosure to the Bureau of Reclamation. However, in any case where publication, on sale or public use has initiated the one year statutory period wherein valid patent protection can still be obtained in the United States, the period for election of title may be shortened by the Bureau of Reclamation to a date that is no more than 60 days prior to the end of the statutory period.

(3) The Recipient will file its initial patent application on a subject invention to which it elects to retain title within one year after election of title or, if earlier, prior to the end of any statutory period wherein valid patent protection can be obtained in the United States after a publication, on sale, or public use. The Recipient will file patent applications in additional countries or international patent offices within either ten months of the corresponding initial patent application or six months from the date permission is granted by the Commissioner of Patents and Trademarks to file foreign patent applications where such filing has been prohibited by a Secrecy Order.

(4) Requests for extension of the time for disclosure, election, and filing under subparagraphs (1), (2), and (3) may, at the discretion of the Bureau of Reclamation, be granted.

(d) Conditions When the Government May Obtain Title

The Recipient will convey to the Bureau of Reclamation, upon written request, title to any subject inventions

(1) If the Recipient fails to disclose or elect title to the subject invention within the times specified in (c), above, or elects not to retain title; provided that the Bureau of Reclamation may only request title within 60 days after learning of the failure of the Recipient to disclose or elect within the specified times.

(2) In those countries in which the Recipient fails to file patent applications within the times specified in (c) above; provided, however, that if the Recipient has filed a patent application in a country after the times specified in (c) above, but prior to its receipt of the written request of the Bureau of Reclamation, the Recipient shall continue to retain title in that country.

(3) In any country in which the Recipient decides not to continue the prosecution of any application for, to pay the maintenance fees on, or defend in reexamination or opposition proceeding on, a patent on a subject invention.

(e) Minimum Rights to Recipient and Protection of the Recipient Right to File

(1) The Recipient will retain a nonexclusive royalty-free license throughout the world in each subject invention to which the Government obtains title, except if the Recipient fails to disclose the invention within the times specified in (c), above. The Recipient's license extends to its domestic subsidiary and affiliates, if any, within the corporate structure of which the Recipient is a party and includes the right to grant sublicenses of the same scope to the extent the Recipient was legally obligated to do so at the time the agreement was awarded. The license is transferable only with the approval of the Bureau of Reclamation except when transferred to the successor of that party of the Recipient's business to which the invention pertains.

(2) The Recipient's domestic license may be revoked or modified by the Bureau of Reclamation to the extent necessary to achieve expeditious practical application of the subject invention pursuant to an application for an exclusive license submitted in accordance with applicable provisions at 37 CFR part 404 and Bureau of Reclamation licensing regulations (if any). This license will not be revoked in that field of use or the geographical areas in which the Recipient has achieved practical application and continues to make the benefits of the invention reasonably accessible to the public. The license in any foreign country may be revoked or modified at the discretion of the Bureau of Reclamation to the extent the Recipient, its licensees, or the domestic subsidiaries or affiliates have failed to achieve practical application in that foreign country.

(3) Before revocation or modification of the license, the Bureau of Reclamation will furnish the Recipient a written notice of its intention to revoke or modify the license, and the Recipient will be allowed thirty days (or such other time as may be authorized by the Bureau of Reclamation for good cause shown by the Recipient) after the notice to show cause why the license should not be revoked or modified. The Recipient has the right to appeal, in accordance with applicable regulations in 37 CFR part 404 and Bureau of Reclamation

regulations (if any) concerning the licensing of Government-owned inventions, any decision concerning the revocation or modification of the license.

f) Recipient Action to Protect the Government's Interest

(1) The Recipient agrees to execute or to have executed and promptly deliver to the Bureau of Reclamation all instruments necessary to (i) establish or confirm the rights the Government has throughout the world in those subject inventions to which the Recipient elects to retain title, and (ii) convey title to the Bureau of Reclamation when requested under paragraph (d) above and to enable the government to obtain patent protection throughout the world in that subject invention.

(2) The Recipient agrees to require, by written agreement, its employees, other than clerical and non-technical employees, to disclose promptly in writing to personnel identified as responsible for the administration of patent matters and in a format suggested by the Recipient each subject invention made under agreement in order that the Recipient can comply with the disclosure provisions of paragraph (c), above, and to execute all papers necessary to file patent applications on subject inventions and to establish the government's rights in the subject inventions. This disclosure format should require, as a minimum, the information required by (c)(1), above. The Recipient shall instruct such employees through employee agreements or other suitable educational programs on the importance of reporting inventions in sufficient time to permit the filing of patent applications prior to U.S. or foreign statutory bars.

(3) The Recipient will notify the Bureau of Reclamation of any decisions not to continue the prosecution of a patent application, pay maintenance fees, or defend in a reexamination or opposition proceeding on a patent, in any country, not less than thirty days before the expiration of the response period required by the relevant patent office.

(4) The Recipient agrees to include, within the specification of any United States patent applications and any patent issuing thereon covering a subject invention, the following statement, ``This invention was made with government support under (identify the agreement) awarded by (identify the Federal agency). The government has certain rights in the invention."

(g) Subcontracts

The Recipient will include this provision, suitably modified to identify the parties, in all sub-agreements or subcontracts, regardless of tier, for experimental, developmental or research work. The sub-recipient or subcontractor will retain all rights provided for the Recipient in this provision, and the Recipient will not, as part of the consideration for awarding the sub-agreement or subcontract, obtain rights in the sub-recipient's or subcontractor's subject inventions.

(h) Reporting on Utilization of Subject Inventions

The Recipient agrees to submit on request periodic reports no more frequently than annually on the utilization of a subject invention or on efforts at obtaining such utilization that are being made by the Recipient or its licensees or assignees. Such reports shall include information regarding the status of development, date of first commercial sale or use, gross royalties received by the Recipient, and such other data and information as the Bureau of Reclamation may reasonably specify. The Recipient also agrees to provide additional reports as may be requested by the Bureau of Reclamation in connection with any march-in proceeding undertaken by the Bureau of Reclamation in accordance with paragraph (j) of this provision. As required by 35 U.S.C. 202(c)(5), the Bureau of Reclamation agrees it will not disclose such information to persons outside the government without permission of the Recipient.

(i) Preference for United States Industry

Notwithstanding any other part of this provision, the Recipient agrees that neither it nor any assignee will grant to any person the exclusive right to use or sell any subject inventions in the United States unless such person agrees that any products embodying the subject invention or produced through the use of the subject invention will be manufactured substantially in the United States. However, in individual cases, the requirement for such an agreement may be waived by the Bureau of Reclamation upon a showing by the Recipient or its assignee that reasonable but unsuccessful efforts have been made to grant licenses on similar terms to potential licensees that would be likely to manufacture substantially in the United States or that under the circumstances domestic manufacture is not commercially feasible.

(j) March-in Rights

The Recipient agrees that with respect to any subject invention in which it has acquired title, the Bureau of Reclamation has the right in accordance with the procedures in 37 CFR 401.6 and any supplemental regulations of the Bureau of Reclamation to require the Recipient, an assignee or exclusive licensee of a subject invention to grant a nonexclusive, partially exclusive, or exclusive license in any field of use to a responsible applicant or applicants, upon terms that are reasonable under the circumstances, and if the Recipient, assignee, or exclusive licensee refuses such a request the Bureau of Reclamation has the right to grant such a license itself if the Bureau of Reclamation determines that:

(1) Such action is necessary because the Recipient or assignee has not taken, or is not expected to take within a reasonable time, effective steps to achieve practical application of the subject invention in such field of use.

(2) Such action is necessary to alleviate health or safety needs, which are not reasonably satisfied by the Recipient, assignee or their licensees;

(3) Such action is necessary to meet requirements for public use specified by Federal regulations and such requirements are not reasonably satisfied by the Recipient, assignee or licensees; or

(4) Such action is necessary because the agreement required by paragraph (i) of this provision has not been obtained or waived or because a licensee of the exclusive right to use or sell any subject invention in the United States is in breach of such agreement.

(k) Special Provisions for Agreements with Nonprofit Organizations

If the Recipient is a nonprofit organization, it agrees that:

(1) Rights to a subject invention in the United States may not be assigned without the approval of the Bureau of Reclamation, except where such assignment is made to an organization which has as one of its primary functions the management of inventions, provided that such assignee will be subject to the same provisions as the Recipient;

(2) The Recipient will share royalties collected on a subject invention with the inventor, including Federal employee co-inventors (when the Bureau of Reclamation deems it appropriate) when the subject invention is assigned in accordance with 35 U.S.C. 202(e) and 37 CFR 401.10;

(3) The balance of any royalties or income earned by the Recipient with respect to subject inventions, after payment of expenses (including payments to inventors) incidental to the administration of subject inventions, will be utilized for the support of scientific research or education; and

(4) It will make efforts that are reasonable under the circumstances to attract licensees of subject invention that are small business firms and that it will give a preference to a small business firm when licensing a subject invention if the Recipient determines that the small business firm has a plan or proposal for marketing the invention which, if executed, is equally as likely to bring the invention to practical application as any plans or proposals from applicants that are not small business firms; provided, that the Recipient is also satisfied that the small business firm has the capability and resources to carry out its plan or proposal. The decision whether to give a preference in any specific case will be at the discretion of the Recipient. However, the Recipient agrees that the Bureau of Reclamation may review the Recipient's licensing program and decisions regarding small business applicants, and the Recipient will negotiate changes to its licensing policies, procedures, or practices with the Bureau of Reclamation when this review discloses that the Recipient could take reasonable steps to implement more effectively the requirements of this paragraph (k)(4).

(l) Communication

Communications regarding matters relating to this provision shall be directed to the Deputy Associate Solicitor, Branch of Procurements and Patents, Office of the Solicitor, U.S. Department of the Interior, Washington, DC 20240.

B.19 COPYRIGHTS (Reclamation 08/03)

B.19.1 For recipients subject to the administrative standards set forth in OMB Circular A-110, the following copyright provision, as implemented by 43 CFR 12.936(a), shall apply:

The recipient may copyright any work that is subject to copyright and was developed, or for which ownership was purchased, under an award. The Federal awarding agency(ies) reserves a royalty-free, nonexclusive and irrevocable right to reproduce, publish, or otherwise use the work for Federal purposes, and to authorize others to do so.

B.19.2 For recipients subject to the administrative standards set forth in OMB Circular A-102 and the Grants Management Common Rule, the following copyright provision, as implemented by 43 CFR 12.74, shall apply:

The Federal awarding agency reserves a royalty-free, nonexclusive, and irrevocable license to reproduce, publish or otherwise use, and to authorize others to use, for Federal Government purposes:

(a) The copyright in any work developed under a grant, sub-grant, or contract under a grant or sub-grant; and

(b) Any rights of copyright to which a grantee, sub-grantee or a contractor purchases ownership with grant support.

B.20 RIGHTS TO DATA (Reclamation 08/03)

For recipients subject to the administrative standards set forth in OMB Circular A-110, the following provision, as implemented by 43 CFR 12.936(c), shall apply:

The Federal Government has the right to:

(1) Obtain, reproduce, publish or otherwise use the data first produced under an award; and

(2) Authorize others to receive, reproduce, publish, or otherwise use such data for Federal purposes.

B.21 DUN AND BRADSTREET (D&B) DATA UNIVERSAL NUMBERING SYSTEM (DUNS) REQUIREMENT (Reclamation 07/04)

Effective October 1, 2003, applicants for Federal grants or cooperative agreements must provide a D&B DUNS number with their application. This number is to be included in ***Block 5*** of your Standard Form (SF)-424 Application for Federal Assistance (Rev.9-2003), or in ***Block 6*** of previous versions of the SF-424.

If you do not have a DUNS number, one may be obtained at no cost by calling the dedicated toll-free DUNS Number Request Line at 1-866-705-5711, or by going to the DUNS Government Contractor and Grantee website at https://eupdate.dnb.com/requestoptions/government/ccrreg/ .

Individuals who would personally receive a grant or cooperative agreement award from the Federal government, apart from any business or non-profit organization they operate, are exempt from the requirement to provide a DUNS number with their application. Reclamation must, however, have a DUNS number for payment processing purposes, and will therefore obtain a DUNS number for any individual who is awarded a grant or cooperative agreement.

B.22 GRANTS.GOV APPLY: ELECTRONIC APPLICATION SUBMISSION AND RECEIPT PROCEDURES (Reclamation 06/06)

This provision provides information on the application submission and receipt instructions for applications submitted through Grants.gov Apply. Please read the following instructions carefully and completely.

PLEASE NOTE THAT YOU MUST REGISTER WITH GRANTS.GOV PRIOR TO SUBMITTING AN APPLICATION THROUGH THE GRANTS.GOV WEBSITE AND ***THE REGISTRATION PROCESS MAY TAKE FROM 7 TO 21 DAYS***.

1. **Electronic Delivery**. Reclamation is participating in the Grants.gov Initiative that provides the Grant

Community with a single site to find and apply for grant funding opportunities. Reclamation encourages applicants to submit their applications electronically through http://www.grants.gov/Apply.

2. **The following describes what to expect when applying on line using Grants.gov/Apply:**

a. Instructions. On the site, you will find step-by-step instructions which enable you to apply electronically for Reclamation funds. The Grants.gov/Apply feature includes a simple, unified application process that makes it possible for applicants to apply for grants online.

Before applying, you will need to complete the Grants.gov registration process. The information applicants need to register can be found at http://www.grants.gov/GetStarted. The site also contains registration checklists to help you walk through the process (column on the left side of the Get Started page). Reclamation recommends that you download the checklists and prepare the information requested before beginning the registration process. Reviewing and assembling required information before beginning the registration process will make the process quicker and will save time.

b. DUNS Requirement. All applicants applying for funding, including renewal funding, must have a Dun and Bradstreet Universal Data Numbering System (DUNS) number. The DUNS number must be included in the data entry field labeled "Organizational Duns" on the form SF-424. Instructions for obtaining a DUNS number can be found at the following website: http://www.grants.gov/GetStarted.

c. Central Contractor Registry and Credential Provider Registration. In addition to having a DUNS number, applicants applying electronically through Grants.gov must register with the Federal Central Contractor Registry and with a Credential Provider. The http://www.grants.gov website at http://www.grants.gov/GetStarted provides step-by-step instructions for registering in the Central Contractor Registry and for registering with a credential provider. All applicants filing electronically must register with the Central Contractor Registry and receive credentials from the Grants.gov credential provider in order to apply on line. Failure to register with the Central Contractor Registry and credential provider will result in your application being rejected by the Grants.gov portal.

The registration process is a separate process from submitting an application. **Applicants are, therefore, encouraged to register early**. The registration process can take approximately two weeks to be completed. Therefore, registration should be done in sufficient time to ensure it does not impact your ability to meet required submission deadlines. You will be able to submit your application online anytime after you receive your e-authentication credentials.

d. Electronic Signature. Applications submitted through Grants.gov constitute submission as electronically signed applications. The registration and e-authentication process establishes the Authorized Organization Representative (AOR). When you submit the application through Grants.gov, the name of your authorized organization representative on file will be inserted into the signature line of the application. **Applicants must register the individual who is able to make legally binding commitments for the applicant organization as the Authorized Organization Representative.**

3. **Instructions on how to submit an electronic application to Reclamation via Grants.gov/Apply:**

Grants.gov has a full set of instructions on how to apply for funds on its website at http://www.grants.gov/CompleteApplication. The following provides simple guidance on what you will find on the Grants.gov/Apply site. Applicants are encouraged to read through the page entitled, "Complete Application Package" before getting started. Grants.gov allows applicants to download the application package, instructions and forms that are incorporated in the instructions, and work off line. In addition to forms that are part of the application instructions, there will be a series of electronic forms that are provided utilizing a PureEdge reader.

a. PureEdge Reader. The PureEdge Reader is available free for download from the Grants.gov/Get Started site. The PureEdge Reader allows applicants to read the electronic files in a form format so that they will look like any other Standard or Reclamation form. The PureEdge forms have content sensitive help. To use this feature you will need to click on the icon at the top of the page that features an arrow with a question mark. This engages the content sensitive help for each field you will need to complete on the electronic form. The PureEdge forms can be downloaded and saved on your hard drive, network drive(s), or CDs. Macintosh Users will need to use the

Virtual PC emulator software, which allows PC software to run on Macintosh platforms.

b. Mandatory Fields on PureEdge Forms. In the PureEdge forms you will note fields that will appear with a yellow background color on the data fields to be completed. These fields are mandatory fields and they **must** be completed to successfully submit your application.

c. Completion of SF-424 Fields First. The PureEdge forms are designed to fill in common required fields such as the applicant name and address, DUNS number, etc., on all PureEdge electronic forms. **To trigger this feature, an applicant must complete the SF-424 information first.** Once it is completed the information will transfer to the other forms.

d. Customer Support. The Grants.gov website provides customer support via (800) 518-GRANTS (this is a toll-free number) or through e-mail at support@grants.gov. The customer support center is open from 7:00 a.m. to 9:00 p.m. Eastern time, Monday through Friday, except Federal holidays, to address Grants.gov technology issues. For technical assistance on program related questions, contact the number listed in the Program Section of the program you are applying for.

4. Timely Receipt Requirements and Proof of Timely Submission.

Electronic Submission. All applications must be received by http://www.grants.gov/Apply **by (insert time) Eastern time** on the due date listed in the funding announcement. Proof of timely submission is automatically recorded by Grants.gov. An electronic time stamp is generated within the system when the application is successfully received by Grants.gov. The applicant will receive an acknowledgement of receipt and a tracking number from Grants.gov with the successful transmission of their application. Applicants should print this receipt and save it, along with facsimile receipts for information provided by facsimile, as proof of timely submission.

When Reclamation successfully retrieves the application from Grants.gov, Grants.gov will provide an electronic acknowledgment of receipt to the e-mail address of the AOR. Proof of Timely submission shall be the date and time that Grants.gov receives your application. Applications received by Grants.gov, after the established due date for the program will be considered late and will not be considered for funding by Reclamation.

Reclamation suggests that applicants submit their applications during the operating hours of the Grants.gov Support Desk, so that if there are questions concerning transmission, operators will be available to walk you through the process. Submitting your application during the Support Desk hours will also ensure that you have sufficient time for the application to complete its transmission prior to the application deadline. Applicants using dial-up connections should be aware that transmission should take some time before Grants.gov receives it.

Grants.gov will provide either an error or a successfully received transmission message. The Grants.gov Support desk reports that some applicants abort the transmission because they think that nothing is occurring during the transmission process. Please be patient and give the system time to process the application. Uploading and transmitting many files, particularly electronic forms with associated XML schemas, will take some time to be processed.

GENERAL PROVISIONS (06/04)

C.1 Regulations and Guidance

The regulations at 43 CFR, Part 12, Subparts A, C, E, and F, are hereby incorporated by reference as though set forth in full text. The following Office of Management and Budget (OMB) Circulars, as applicable, and as implemented by 43 CFR Part 12, are also incorporated by reference and made a part of this agreement. Failure of a recipient to comply with any provision may be the basis for withholding payments for proper charges made by the recipient and for termination of support. Copies of OMB Circulars are available on the Internet at http://www.whitehouse.gov/omb/grants/grants_circulars.html. The implementation of the circulars at 43 CFR Part 12 is available at http://www.access.gpo.gov/nara/cfr/cfr-table-search.html#page1.

C.1.1. Agreements with colleges and universities shall be in accordance with the following circulars:

Circular A-21, revised May 10, 2004, "Cost Principles for Educational Institutions"

Circular A-110, as amended September 30, 1999, "Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations"

Circular A-133, revised June 27, 2003, "Audits of States, Local Governments, and Non-Profit Organizations"

C.1.2. Agreements with State and local governments shall be in accordance with the provisions of the following circulars:

Circular A-87, revised May 10, 2004, "Cost Principles for State, Local, and Indian Tribal Governments"

Circular A-102, as amended August 29, 1997, "Grants and Cooperative Agreements with State and Local Governments" (Grants Management Common Rule, Codification by Department of Interior, 43 CFR 12)

Circular A-133, revised June 27, 2003, Audits of States, Local Governments, and Non-Profit Organizations"

C.1.3. Agreements made with nonprofit organizations shall be in accordance with the following circulars and provisions:

Circular A-110, as amended September 30, 1999, "Uniform Administrative Requirements for Grants and Agreements With Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations"

Circular A-122, revised May 10, 2004, Cost Principles for Non-Profit Organizations"

Circular A-133, revised June 27, 2003, Audits of States, Local Governments, and Non-Profit Organizations

C.1.4. All agreements with organizations other than those indicated above shall be in accordance with the basic principles of OMB Circular A-110, and cost principles shall be in accordance with 48 CFR Subpart 31.2 titled "Contracts with Commercial Organizations" which is available on the Internet at http://www.access.gpo.gov/nara/cfr/cfr-table-search.html#page1.

C.2. Debarment and Suspension

The Department of the Interior regulations at 43 CFR 42—Government-wide Debarment and Suspension (Non-procurement), which adopt the common rule for the government-wide system of debarment and suspension for non-procurement activities, are hereby incorporated by reference and made a part of this agreement. By entering into this grant or cooperative agreement with the Bureau of Reclamation, the recipient agrees to comply with 43 CFR 42, Subpart C, and agrees to include a similar term or condition in all lower-tier covered transactions. These regulations are available at http://www.access.gpo.gov/nara/cfr/cfrhtml_00/Title_43/43cfr42_00.html.

C.3. Drug-Free Workplace

The Department of the Interior regulations at 43 CFR 43—Government-wide Requirements for Drug-Free Workplace (Financial Assistance), which adopt the portion of the Drug-Free Workplace Act of 1988 (41 U.S.C. 701 et seq, as amended) applicable to grants and cooperative agreements, are hereby incorporated by reference and made a part of this agreement. By entering into this grant or cooperative agreement with the Bureau of Reclamation, the recipient agrees to comply with 43 CFR 43, Subpart B, if the recipient is not an individual, or with 43 CFR 43, Subpart C, if the recipient is an individual. These regulations are available at http://www.access.gpo.gov/nara/cfr/cfrhtml_00/Title_43/43cfr43_00.html.

C.4. Assurances and Certifications Incorporated by Reference

a. The provisions of the Assurances, SF 424B or SF 424D as applicable, executed by the Recipient in connection with this agreement shall apply with full force and effect to this agreement as if fully set forth in these

General Provisions. Such Assurances include, but are not limited to, the promise to comply with all applicable Federal statutes and orders relating to nondiscrimination in employment, assistance, and housing; the Hatch Act; Federal wage and hour laws and regulations and work place safety standards; Federal environmental laws and regulations and the Endangered Species Act; and Federal protection of rivers and waterways and historic and archeological preservation.

b. When required by 43 CFR 18—New Restrictions on Lobbying, recipients shall complete a Certification Regarding Lobbying form. This certification is incorporated by reference and made a part of this agreement. These regulations are available at http://www.access.gpo.gov/nara/cfr/cfrhtml_00/Title_43/43cfr18_00.html.

C.5. Covenant Against Contingent Fees

The recipient warrants that no person or agency has been employed or retained to solicit or secure this agreement upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide offices established and maintained by the recipient for the purpose of securing agreements or business. For breach or violation of this warranty, the Government shall have the right to annul this agreement without liability or, in its discretion, to deduct from the agreement amount, or otherwise recover, the full amount of such commission, percentage, brokerage, or contingent fee.

C.6. Contracting with Small and Minority Firms, and Women's Business Enterprises

It is a national policy to award a fair share of contracts to small and minority business firms. The Department of the Interior is strongly committed to the objectives of this policy and encourages all recipients of its grants and cooperative agreements to take affirmative steps to ensure such fairness.

a. The grantee and sub-grantee shall take all necessary affirmative steps to assure that minority firms, and women's business enterprises are used when possible.

b. Affirmative steps shall include:

(1) Placing qualified small and minority businesses and women's business enterprises on solicitation lists;

(2) Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources;

(3) Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority business, and women's business enterprises;

(4) Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority business, and women's business enterprises;

(5) Using the services and assistance of the Small Business Administration, and the Minority Business Development Agency of the Department of Commerce as appropriate, and

(6) Requiring the prime contractor, if subcontracts are to be let, to take the affirmative steps listed in b(1) through (5) above.

C.7. Notice Regarding Buy American Act

In accordance with the annual Energy and Water Development Appropriations Act, please be advised that it is and has been the sense of Congress that, to the greatest extent practicable, all equipment and products purchased with funds made available in this Act should be American-made. This provision shall remain in effect unless revoked by a future specific act of Congress.

C.8. Resolving Disagreements

When entering into a cooperative agreement with a recipient, Reclamation commits itself to working with the

recipient in a harmonious manner to achieve the objectives of the project successfully. When disagreements arise between the parties, they must be resolved according to the procedures discussed below:

a. Reclamation shall attempt first to resolve disagreements with the recipient through informal discussion among the Grants or Contract Specialist, the Program Officer, and the recipient's Project Director.

b. If the disagreement cannot be resolved through informal discussion between these parties, the Grants Specialist and the Program Officer shall document the nature of the disagreement and bring it to the attention of the Grants Officer.

c. After reviewing the facts of the disagreement, as presented by the Grants and Program Offices, the Grants Officer will arrange a formal meeting. If agreement still cannot be reached, the parties will collectively decide on any varied approaches, which might be used to resolve the disagreement. The parties shall be responsible for their individual expenses related to any approach utilized to resolve the disagreement. If attempts at resolving the disagreement fail, the Chief, Acquisition and Assistance Management Services, or the Regional Director, whichever is applicable, shall make a decision which shall be final and conclusive.

d. Nothing herein shall be construed to delay or limit Reclamations right to take immediate and appropriate action, as set forth at 43 CFR Subpart 12.83 or 12.962, as applicable, in the event of material noncompliance by the recipient, and no attempts at informal resolution shall be necessary.

Any post award issue will be open for resolution in accordance with the above procedures, with the exception of disagreements regarding continuation of the agreement (termination must be in accordance with 43 CFR 12), or other matters specifically addressed by the agreement itself.

C.9. Lobbying Restrictions

In accordance with the annual Energy and Water Development Appropriations Act, please be advised that it is and has been the sense of Congress that none of the funds appropriated by this Act may be used in any way, directly or indirectly, to influence Congressional action on any legislation or appropriation matters pending before Congress, other than to communicate to Members of Congress as described in 18 U.S.C. 1913. This provision shall remain in effect unless revoked by a future specific act of Congress.

C.10. Electronic Funds Transfer (EFT)

In accordance with the Debt Collection Improvement Act of 1996, 31 CFR 208, effective January 2, 1999, all Federal payments to recipients must be made by EFT unless a waiver has been granted in accordance with 31 CFR 208.4. Upon award of a financial assistance agreement, Reclamation will provide the recipient with further instructions for implementation of EFT payments or a certification form to request exemption from EFT.

C.11. Endorsement of Commercial Products and Services

In accordance with 43 CFR 12.2(d), this provision applies to grants and cooperative agreements whose principal purpose is a partnership where the recipient contributes resources to promote agency programs, publicize agency activities, assists in fund-raising, or provides assistance to the agency. If the agreement is awarded to a recipient, other than a State government, a local government, or a federally-recognized Indian tribal government, and the agreement authorizes joint dissemination of information and promotion of activities being supported, the following provision shall be made a term and condition of the award:

> Recipient shall not publicize or otherwise circulate, promotional material (such as advertisements, sales brochures, press releases, speeches, still and motion pictures, articles, manuscripts or other publications) which states or implies governmental, Departmental, bureau, or government employee endorsement of a product, service or position which the recipient represents. No release of information relating to this award may state or imply that the Government approves of the recipient's work products, or considers the recipient's work product to be superior to other products or services.

All information submitted for publication or other public releases of information regarding this project shall carry the following disclaimer:

> The views and conclusions contained in this document are those of the authors and should not be interpreted as representing the opinions or policies of the U.S. Government. Mention of trade names or commercial products does not constitute their endorsement by the U.S. Government.

Recipient must obtain prior Government approval for any public information releases concerning this award, which refer to the Department of the Interior or any bureau or employee (by name or title). The specific text, layout photographs, etc. of the proposed release must be submitted with the request for approval.

A recipient further agrees to include this provision in a sub-award to any sub-recipient, except for a sub-award to a State government, a local government, or to a federally-recognized Indian tribal government.

List of Documents, Exhibits, or Other Attachments (06/04)

D.1 The following documents, exhibits or attachments are incorporated and made a part of this agreement.

Attachment Number	Title	No. of Pages
1	Certification	1
Incorporated by Reference	Revised Nevada Irrigation District proposal, Dated May 05, 2006	24

Attachment 1

U.S. Department of the Interior

Certifications Regarding Lobbying

Signature on this form provides for compliance with certification requirements under 43 CFR Part18. This certification shall be treated as a material representation of fact upon which reliance will be placed when the Department of the Interior determines to award the covered transaction, grant, cooperative agreement or loan.

CHECK _____ IF CERTIFICATION IS FOR THE AWARD OF ANY OF THE FOLLOWING AND THE AMOUNT EXCEEDS $100,000: A FEDERAL GRANT OR COOPERATIVE AGREEMENT; SUBCONTRACT, OR SUBGRANT UNDER THE GRANT OR COOPERATIVE AGREEMENT.

CHECK _____ IF CERTIFICATION IS FOR THE AWARD OF A FEDERAL LOAN EXCEEDING THE AMOUNT OF $150,000, OR A SUBGRANT OR SUBCONTRACT EXCEEDING $100,000, UNDER THE LOAN.

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, and officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying" in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

As the authorized certifying official, I hereby certify that the above specified certifications are true.

Ron Nelson

SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL

Ron Nelson, General Manager

TYPED NAME AND TITLE

9-26-07

DATE

DI-2010 (Part E) June 1995

Appendix E

Interagency Communication

Harris, Melissa M

From: Rivera, Patricia L
Sent: Tuesday, May 18, 2010 1:27 PM
To: Harris, Melissa M
Subject: RE: ITA Request for EA

Follow Up Flag: Follow up
Flag Status: Completed

Melissa,

I reviewed the proposed action to award $300,000 in a Challenge Grant to NID for the construction of an approximately 3,550-foot long raw water pipeline (herein referred to as the Mt. Vernon Siphon) to bypass a 5,680-foot long portion of the Combie Ophir IV Canal (canal). At the terminus of the Mt. Vernon Siphon raw water will be directed into the portion of the Combie Ophir IV Canal that will remain in service. The Mt. Vernon Siphon will be a 24-inch water pipeline buried using a trench and fill method and will include appurtenances such as air release valves, blow-off valves, overflow stand pipe structures, and air vents. The trench for the Mt. Vernon Siphon will be about 5 feet wide and up to 7 feet deep. A 12-foot wide gravel road will be constructed on top of, or along side, the Mt. Vernon Siphon for access and maintenance purposes. Approximately 1,109 feet of the Mr. Vernon Siphon will follow the canal alignment south of Atwood Road. The canal diverges west from the project alignment at this juncture and a 400-foot long, 4-inch pipeline will connect the Mt. Vernon Siphon to two turnout structures in the canal (one turnout being for the Howard Ditch). Another 90-foot long, 6-inch pipeline will be installed parallel to the Mt. Vernon Siphon in order to provide alternatives for service to NID customers currently using the Howard Ditch for irrigation water supply.

Water levels in the existing canal will be reduced over a three year period following completion of the Mt. Vernon Siphon to assess if dewatering the canal will result in any groundwater affects. After this three year period, if no groundwater changes occur, a pipeline approximately 1,450 feet long will be constructed from the junction of the Mt. Vernon Siphon and the unaltered portion of the Combie Ophir IV Canal to service customers along this progressively dewatered portion of the canal. This final pipe will be 4 to 6 inch in diameter and constructed in the dewatered canal without trenching, and will be covered with fill material obtained from a commercial source, and the top line will be contoured to the surrounding landscape. The pipeline will include turnouts with service boxes to provide alternative water delivery to existing customers. Staging areas for this portion of the construction will be identified in the future, but will in previously developed areas. The remainder of the canal, approximately 4,230 feet, will be dewatered and abandoned.

The proposed action does not have a potential to affect Indian Trust Assets. The neatest ITA is Auburn Rancheria approximately 12 miles SW of the project location.

Patricia

Harris, Melissa M

From: Barnes, Amy J
Sent: Monday, June 14, 2010 1:11 PM
To: Harris, Melissa M
Cc: MPR Cultural Resources Section
Subject: EA 10-02 Combie Ophir IV Canal Bypass (Mt. Vernon) Encasement Project (09-CCAO-164)

Tracking #09-CCAO-164

Project: EA 10-02 Combie Ophir IV Canal Bypass (Mt. Vernon) Encasement Project

Location: Placer County; Auburn and Gold Hill 7.5' USGS topographic quadrangle maps. sec. 5 and 6, T. 12 N., R. 8 E. and sec. 31 and 32, T. 13 N., R. 8 E., Mount Diablo Meridian

The activities associated with Reclamation awarding a Water 2025 Challenge Grant to the Nevada Irrigation District (NID) for a new pipeline to bypass a portion of the Combie Ophir IV Canal will result in no historic properties affected. NID proposes to construct an approximately 3,550-foot long raw water pipeline to bypass a 5,680-foot long portion of the Combie Ophir IV Canal (canal), that will be abandoned (see Figure 1). The 24-inch water pipeline will be buried using a trench and fill method and will include appurtenances such as air release valves, blow-off valves, overflow stand pipe structures, and air vents. The trench for the new pipeline will be about 5 feet wide and up to 7 feet deep. A 12-foot wide gravel road will be constructed on top of, or along side, the new pipeline for access and maintenance purposes (Specification Maps G2, C1-C6, C14). Approximately 1,109 feet of the new pipeline will follow the canal alignment south of Atwood Road. The canal diverges west from the pipeline alignment at this juncture and a 400-foot long, 4-inch pipeline will connect the 24-inch pipe to two turnout structures in the canal (one turnout being for the Howard Ditch) (Map C6). Another 90-foot long, 6-inch pipeline will be installed parallel to the new pipeline in order to provide alternatives for service to NID customers currently using the Howard Ditch for irrigation water supply. Water levels in the existing canal will be reduced over a three year period following completion of the new water pipeline. Use of this reach of canal will be phased out and abandoned as is without modification.

The final engineering designs for this project included an additional 1,450-foot-long pipeline that will be placed within the southern portion of the canal to continue service to NID water users. The pipe will measure 4 inches and 6 inches in diameter, will be placed in the bottom of the canal without trenching, will be covered with fill material obtained from a commercial source, and the top line will be contoured to the surrounding landscape. The pipeline will include turnouts with service boxes to provide alternative water delivery to existing customers.

Pipeline installations will involve a rubber-tired backhoe and/or a track-powered excavator to dig the trench. Other construction equipment will include an asphalt cutter and roller, dump truck, concrete truck, horizontal directional boring machine (may or may not be needed), pipe fusion machine, rubber-tired loader, small compacter, small skip loader, semi-truck and trailer for pipe, water truck, a truck or trailer mounted welder, air compressor, and a generator. Equipment and materials will be staged in public rights-of-way or on private property.

In an effort to identify historic properties, Reclamation reviewed its archaeological site index and project data as well as the General Land Office and Master Title Plat maps. NID contracted ICF Jones & Stokes to survey the APE for cultural resources. A segment of the Combie Ophir IV Canal and a rock wall segment (CA-PLA-1405-H) were the only cultural resources identified within the APE. Reclamation applied the National Register of Historic Places (NRHP) criteria of evaluation at 36 CFR Part 60.4 to the Combie Ophir IV Canal segment and rock wall (CA-PLA-1405-H) and determined that these resources are not eligible for listing on the NRHP. Both resources lack integrity of design, materials, workmanship, and feeling. Additionally, neither the canal segment nor rock wall exhibit any physical characteristics, nor is there documented history, that specifically relates these resources to the historic pattern of settlement and economic development in Placer County, or a notable individual or company. Neither resource exhibits distinct characteristics a type, period, or method of construction and recording the canal segment and rock wall in accordance with the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation has exhausted their information

potential. Therefore, the Combie Ophir IV Canal segment and rock wall (CA-PLA-1405-H) are not eligible for listing on the NRHP under Criteria A-D.

Reclamation consulted with SHPO regarding this undertaking, Reclamations' determination that the Combie Ophir IV Canal segment and rock wall (CA-PLA-1405-H) are not historic properties, and a finding of no historic properties affected pursuant to 36 CFR Part 800.4(d)(1) on October 26, 2009. SHPO concurred with Reclamations' determination and findings on November 10, 2009. Reclamation consulted with SHPO again on May 14, 2010 regarding the additional 1,450-foot-long pipeline, which does not change Reclamation's finding of no historic properties affected. SHPO concurred with this determination on June 7, 2010.

As the proposed action will not affect historic properties, and SHPO has concurred, Reclamations' responsibilities under Section 106 of the National Historic Preservation Act are fulfilled.

Thank you for the opportunity to review the proposed action. Please place a copy of this concurrence and attached correspondence with the EA administrative record.

Amy J. Barnes
Archaeologist
U.S. Bureau of Reclamation
Mid-Pacific Region, MP-153
2800 Cottage Way
Sacramento, CA 95825
916-978-5047
abarnes@usbr.gov

OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION
P.O. BOX 942896
SACRAMENTO, CA 94296-0001
(916) 653-6624 Fax: (916) 653-9824
calshpo@ohp.parks.ca.gov
www.ohp.parks.ca.gov

November 10, 2009

In Reply Refer To: BUR091028A

Michael A. Chotkowski
Regional Environmental Officer
United States Department of the Interior
Bureau of Reclamation
Mid-Pacific Regional Office
2800 Cottage Way
Sacramento, CA 95825-1898

Re: Combie Ophir IV Canal Bypass Encasement Project, Placer County, California (Project No. 09-CCAO-164).

Dear Mr. Chotkowski:

Thank you for seeking my consultation regarding the above noted undertaking. Pursuant to 36 CFR Part 800 (as amended 8-05-04) regulations implementing Section 106 of the National Historic Preservation Act (NHPA), the Bureau of Reclamation (BUR) is seeking my comments regarding the effects that the subject project will have on historic properties. The proposed project is being funded by the BUR's Water 2025 Challenge Grant to the Nevada Irrigation District (NID). The BUR has concluded that the use of federal expenditures for this project constitutes an undertaking pursuant to review for compliance with the Section 106 regulations. In addition to your letter of October 26, 2009 and attachments (maps and aerial photograph with overlays), you have submitted the following report in support of this undertaking:

- *Cultural Resources Study for Combie Ophir IV Canal Bypass Encasement (Mt. Vernon Siphon) Project (MP Tracking #09-CCAO-164* (Trish Fernandez: ICF Jones & Stokes: October 16, 2009).

The project involves the construction of a new raw water pipeline, 3550 feet in length, to bypass a 5680-foot section of the Combie Ophir IV Canal. Once this 24-inch diameter buried pipeline is in place, the bypassed section of canal will be abandoned. The pipeline bypass is designed to increase the efficiency and safety of water delivery in this portion of the NID system. The pipeline will be buried in a seven-foot deep by five-foot wide (approximate) trench. The pipeline will also require air release valves, blow-off valves, overflow standpipe structures, and air vents. The BUR has determined that the Area of Potential Effects (APE) for this undertaking consists of the 30-foot wide NID right-of-way for the pipeline route and the section of abandoned canal, a total area of approximately 5.2 acres.

Historic property identification efforts by the BUR identified a segment of a historic water conveyance feature, the Combie Ophir IV Canal, and a section of a rock wall along the south side of Atwood Road, within the project APE. The BUR has concluded that neither of these two historic-era cultural resources meets the eligibility criteria for the National Register of Historic Places.

After reviewing your letter and supporting documentation, I concur with your determinations that both the NID Combie Ophir IV Canal and site P-31-1811 (Atwood Road rock wall section) are ineligible for the NRHP. Accordingly, as these are the only historic properties identified in the project APE, I have no objection to your finding of No Historic Properties Affected. Be advised that under certain circumstances, such as unanticipated discovery or a change in project description, the BUR may have additional future responsibilities for this undertaking under 36 CFR Part 800. Thank you for seeking my comments and for considering historic properties in planning your project. If you require further information, please contact William Soule, Associate State Archeologist, at phone 916-654-4614 or email wsoule@parks.ca.gov.

Sincerely,

Susan K Stratton for

Milford Wayne Donaldson, FAIA
State Historic Preservation Officer

OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION
P.O. BOX 942896
SACRAMENTO, CA 94296-0001
(916) 653-6624 Fax: (916) 653-9824
calshpo@ohp.parks.ca.gov
www.ohp.parks.ca.gov

June 07, 2010

In Reply Refer To: BUR091102B

Michael A. Chotkowski
Regional Environmental Officer
United States Department of the Interior
Bureau of Reclamation
Mid-Pacific Regional Office
2800 Cottage Way
Sacramento, CA 95825-1898

Re: Continued Consultation regarding the Combie Ophir IV Canal Bypass Encasement Project, Placer County, California (Project No. 09-CCAO-164).

Dear Mr. Chotkowski:

Thank you for continuing to seek my consultation regarding the above noted undertaking. Pursuant to 36 CFR Part 800 (as amended 8-05-04) regulations implementing Section 106 of the National Historic Preservation Act (NHPA), the Bureau of Reclamation (BUR) is seeking my comments regarding the effects that the subject project will have on historic properties. At this time you are informing me of a change in design for this undertaking. The Nevada Irrigation District, the project proponent, is proposing to add an additional section of pipeline, approximately 1,450 feet in length, to the project as originally described in your initial consultation letter of October 26, 2009.

The new section of pipeline (ranging from four inches to six inches in diameter) will be placed within the southern portion of the Combie Ophir IV Canal without trenching and will be covered with fill material from commercial sources. Although this is a new project element, its location was included in the original Area of Potential Effects and historic property assessment. Consequently, the BUR's finding of effect for the re-designed undertaking continues to be that of No Historic Properties Affected pursuant to 36 CFR Part 800.4(d)(1). After reviewing your letter of May 14, 2010 and attachments, I have no objection to this finding of effect for the reconfigured Combie Ophir IV Canal undertaking.

Be advised that under certain circumstances, such as unanticipated discovery or a change in project description, the BUR may have additional future responsibilities for this undertaking under 36 CFR Part 800. Thank you for seeking my comments and for considering historic properties in planning your project. If you require further information, please contact William Soule, Associate State Archeologist, at phone 916-654-4614 or email wsoule@parks.ca.gov.

Sincerely,

Susan K Stratton for

Milford Wayne Donaldson, FAIA
State Historic Preservation Officer

NEVADA IRRIGATION DISTRICT

1036 W. Main Street, Grass Valley, CA 95945-5424 ~ www.nidwater.com
(530) 273-6185 ~ Fax: (530) 477-2646 ~ Toll Free: (800) 222-4102

April 14, 2010

Transmittal Letter

To: Nancy Haley
Chief, California Northern Branch
US Army Corps of Engineers
1325 J Street
Sacramento, CA 95814-2922

Method of Delivery
☑ Regular Mail
☐ Fax
☐ Commercial
☐ Hand Deliver

FOLD

Re: ***SPK-2010-00410***
Mt Vernon Road Siphon

Description of Enclosed

Signed Preliminary Jurisdictional Determination Form

E

J:\Adrian\Projects\6690 - Mt. Vernon Siphon\Correspondance\as USArmy tlt Mt Vernon Permit Signature Prelim Jurisd Form.doc

PRELIMINARY JURISDICTIONAL DETERMINATION FORM
Sacramento District

This preliminary JD finds that there *"may be"* waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

Regulatory Branch: **California North** File/ORM #: **SPK-2010-00410** PJD Date: **April 8, 2010**

State: **CA** City/County: **Auburn, Placer County**
Nearest Waterbody: **North Ravine**

Location (Lat/Long): **38.928256°, -121.116336°**

Size of Review Area: **4.13** acres

Name/Address Of Property Owner/ Potential Applicant: **Adrian Schneider**
Nevada Irrigation District
1036 West Main Street
Grass Valley, California 95945-5424

Identify (Estimate) Amount of Waters in the Review Area
Non-Wetland Waters:

~**1900** linear feet **varies** ft wide **0.217** acres Stream Flow **Per. (seasonal)**

Wetlands: **0.054** acre(s) Cowardin Class: **Palustrine, scrub-shrub**

Name of any Water Bodies on the site identifies as Section 10 Waters: Tidal: Non-Tidal:

☒ Office (Desk) Determination
☐ Field Determination:
Date(s) of Site Visit(s):

SUPPORTING DATA: Data reviewed for preliminary JD (check all that apply – checked items should be included in case file and, where checked and requested, appropriately reference sources below)

☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: **April 5, 2010, Nevada Irrigation District Mount Vernon Siphon Project, Figure 2. Preliminary Wetland Delineation, prepared by EcoSynthesis.**
☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
☐ Data sheets prepared by the Corps.
☐ Corps navigable waters' study.
☒ U.S. Geological Survey Hydrologic Atlas:
  ☐ USGS NHD data.
  ☒ USGS HUC maps.
☒ U.S. Geological Survey map(s). Cite scale & quad name: **7.5' Auburn, California, Quadrangle**
☒ USDA Natural Resources Conservation Service Soil Survey.
☐ National wetlands inventory map(s).
☐ State/Local wetland inventory map(s).
☐ FEMA/FIRM maps.
☐ 100-year Floodplain Elevation (if known):
☒ Photographs: ☒ Aerial ☐ Other
☐ Previous determination(s). File no. and date of response letter:
☒ Other information (please specify): **Combie-Ophir IV Canal discharges to North Ravine.**

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

4/8/10
Signature and Date of Regulatory Project Manager (REQUIRED)

4/12/2010
Signature and Date of Person Requesting Preliminary JD (REQUIRED, unless obtaining the signature is impracticable)

EXPLANATION OF PRELIMINARY AND APPROVED JURISDICTIONAL DETERMINATIONS:

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "preconstruction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825-1846

In Reply Refer To:
81420-2008-TA-0464-2

SEP 18 2008

Ms. Erin Hitchcock
Jones & Stokes
2600 V Street
Sacramento, California 95818

Subject: Review of California Red-Legged Frog Surveys for Nevada Irrigation District's Mt. Vernon Siphon Project, Placer County, California

Dear Ms. Hitchcock:

This is in response to your letter received on August 22, 2008, which requested the U.S. Fish and Wildlife Service (Service) review the survey results for Nevada Irrigation District's (NID) Mt. Vernon Siphon Project in order to assess the potential for take of threatened California red-legged frog (*Rana aurora draytonii*) (frog) as a result of the proposed project. Our comments are based on the August 2008 *Results of Protocol-level Surveys for California Red-Legged Frog at the Mt. Vernon Siphon Project Area, Placer County*, and are issued under the authority of the Endangered Species Act of 1973, as amended (16 U.S.C. §1531 et. seq.) (Act).

As per the Service's February 14, 2008, recommendations (Service File 81420-2008-00464), protocol-level surveys of Howard Ditch were conducted following the Service's 2005, *Revised Guidance on Site Assessment and Field Surveys for the California Red-Legged Frog*. Based on the results, surveyors detected many bullfrogs (*Rana catesbeiana*) and Pacific chorus frogs (*Pseudacris regilla*) but no California red-legged frogs. Because construction activities that have the potential to affect the listed frog will occur during the dry season; surveys of the suitable breeding habitat within dry season dispersal distance did not result in the detection of California red-legged frogs; and the nearest known frog occurrence is approximately 13 miles away, the Service agrees with your determination that the Mt. Vernon Siphon Project is not likely to result in take of this listed species.

Unless new information reveals effects of the proposed action that may affect listed species in a manner or to an extent not considered; or the project is modified in a manner that causes an effect to the listed species that was not considered; or a new species or critical habitat is designated that may be affected by the proposed action, no further action pursuant to the Act, is necessary.

Please address any questions or concerns regarding this response on the Mt. Vernon Siphon Project to Jeremiah Karuzas, or Amy Fesnock, Forest and Foothills Branch Chief, at (916) 414-6600.

Sincerely,

Chris Nagano
Deputy Assistant Field Supervisor

cc:
Nevada Irrigation District, Grass Valley, California

United States Department of the Interior

BUREAU OF RECLAMATION
Central California Area Office
7794 Folsom Dam Road
Folsom, California 95630-1799

IN REPLY REFER TO:

JUL 09 2010

CC-402
ENV- 6.00

MEMORANDUM

To: Central Files

From: Melissa Harris
Natural Resource Specialist

Subject: No Effect Determination for Mt. Vernon Siphon Project Environmental Assessment/Finding Of No Significant Impact

The Bureau of Reclamation has proposed to award a Challenge Grant to Nevada Irrigation District (NID) for $300,000.00 to partially fund the construction of a 3,550-foot long raw water pipeline to bypass a 5,680-foot long portion of the Combie Ophir IV Canal. Reclamation has analyzed the potential for this proposed action to affect listed species and has determined that there will be no effect on listed, proposed, or candidate threatened or endangered species or on designated critical habitat. Pursuant to past agreements, we are providing the information on this determination to the United State Fish and Wildlife Service (Service) prior to taking our final action.

Based on a review of existing information, including a search of the California Native Diversity Database (CNDDB) (2007) and species lists obtained from the Service (2007), the following species were identified as having potential to occur in the project area: Valley Elderberry Beetle (VEB) (*Desmocerus californicus dimorphus*), Vernal Pool Fairy Shrimp (*Branchinecta lynchi*), Vernal Pool Tadpole Shrimp (*Lepidurus packardi*), California Red-Legged Frog (RLF) (*Rana aurora*), California Tiger Salamander (*Ambystoma californiense*), Giant Garter Snake (*Thamnophis couchi gigas*), and Bald Eagle (*Haliaeetus leucocephalus*).

1. No known occurrences of listed, proposed, or candidate threatened or endangered species were identified in the CNDDB in or near the project footprint;

2. Survey for VEB habitat was completed on July 3, 2007 by a botanist/wetland ecologist and wildlife biologist from Jones & Stokes. No elderberry shrubs were found in the project footprint;

3. Although possible habitat was noted for special-status plant and wildlife species within the project area, no special-status species occurrences were detected during site visits on July 3 and August 21, 2007. RLF surveys were performed by a botanist/wetland ecologist and wildlife biologist from Jones & Stokes in conformance with Service protocols and all applicable field data can be obtained in Appendix A of the Mt. Vernon Siphon Project Environmental Assessment (Reclamation, 2010);

4. The portion of the canal that will be dewatered was determined to not contain suitable breeding or non-breeding habitat for RLF;

5. A letter from the Service to Jones & Stokes on September 18, 2008 reviewed the August 21, 2007 RLF survey results, and concurred with Jones & Stokes conclusion that the Mt. Vernon Siphon Project is not likely to result in take of this listed species. A copy of this correspondence is available in Appendix E of the Mt. Vernon Siphon Project Environmental Assessment (Reclamation, 2010);

6. No critical habitat has been designated within or near the project footprint;

7. No vernal pools were observed in the project area;

8. No migratory bird nests were detected in the project area.

Several avoidance measures and best management practices will be implemented.

1. Areas recognized as providing suitable habitat for RLF within the project area will not be used as staging areas for construction

2. Construction activities will not occur during raptor breeding season (September 1 to February 28) to avoid removing active raptor nests. If construction occurs during raptor nesting season (March 1 to August 30) a preconstruction survey will be conducted by a qualified biologist to identify active nests within the project area. If active nests are identified, construction activities will not occur within 500 feet of the active nests until young have fledged.

3. NID will avoid direct impacts to riparian habitat when possible by installing temporary construction fencing around riparian habitat adjacent to construction activities, and trimming vegetation instead of removing entire plants.

For these reasons, Reclamation has determined the proposed project, the dewater of a portion of the Combie Ophir IV Canal and construction of the raw water pipeline, will have no effect on any federally listed, proposed, or candidate, threatened, or endangered species or on designated critical habitat.

If you have any questions, please contact Ms. Melissa Harris at 916-989-7162 or MMHarris@usbr.gov.